Pacific Marine Science Report 76-25

OCEANOGRAPHIC OBSERVATIONS AT OCEAN STATION P

(50° N., 145° W.)

Volume 73

1 May – 23 June 1976

INSTITUTE OF OCEAN SCIENCES, PATRICIA BAY
Victoria, B.C.

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ABSTRACT

Physical, chemical and biological oceanographic observations are made from the weathership at Ocean Weather Station Papa, and between Esquimalt and Station Papa, on a routine continuing basis. Physical oceanography data only are shown, including profiles obtained with bottle casts, and conductivity-temperature-pressure instruments. Surface observations are also shown.

ABSTRACT

Physical, chemical and biological oceanographic observations are made from the weathership at Ocean Weather Station Papa, and between Esquimalt and Station Papa, on a routine continuing basis. Physical oceanographic data only are shown, including profiles obtained with bathythermograph, and conductivity-temperature-pressure instruments. Surface observations are also shown.

INTRODUCTION

Canadian operation of Ocean Weather Station P (Latitude 50°00'N, Longitude 145°00'W) was inaugurated in December 1950. The station is occupied primarily to make meteorological observations of the surface and upper air and to provide an air-sea rescue service. The station is manned by two vessels operated by the Marine Services Branch of the Ministry of Transport. They are the CCGS Vancouver and the CCGS Quadra. Each ship remains on station for a period of six weeks, and is then relieved by the alternate ship, thus maintaining a continuous watch.

Bathythermograph observations have been made at Station P since July 1952. A program of more extensive oceanographic observations commenced in August 1956. This was extended in April 1959 by the addition of a series of oceanographic stations along the route to and from Station P and Swiftsure Bank. These stations are known as Line P stations. The number of stations on Line P has been increased twice and now consists of twelve stations (Fig. 1). Bathythermograph observations and surface salinity sample collections, in addition to being made on Line P oceanographic stations, are also made at odd meridians at 40', i.e. 130°40'W, 141°40'W, etc. These stations are known as Line P BT stations. Data observed prior to 1968 has been indexed by Collins et al. (1969).

The present record includes hydrographic, continuously sampled STP and surface salinity and temperature data collected from the CCGS Vancouver during the period 1 May 1976 to 23 June 1976.

All physical oceanographic data have been stored by the Canadian Oceanographic Data Centre (CODC), 615 Booth Street, Ottawa, Ontario, Canada. Requests for these data should be directed to CODC.

Biological and productivity data are published in the Manuscript Report series of the Fisheries Research Board of Canada (FRB), Pacific Biological Station, Nanaimo, British Columbia, Canada. Requests for these data should be directed to FRB.

Marine geochemical data are for the Ocean Chemistry Group, Ocean and Aquatic Sciences, Environment Canada, 512 - 1230 Government Street, Victoria, British Columbia, Canada.

PROGRAM OF OBSERVATION FROM CCGS VANCOUVER, 1 May 1976 - 23 June 1976 (P-76-4) (CODC Ref. No. 15-76-004)

Oceanographic observations were made by Mr. L. Blower and Mr. B. Canning of Seakem Oceanography Ltd., Victoria, B.C.

En route to Station P, Line P Stations 1 to 7 and 11 were occupied and a STP frofile made to near bottom or 1500 metres. One hydrocast to 1500 m was done at Station 6. Weather did not permit any further outside sampling.

Samples for salinity, nitrate, nutrient, alkalinity and total CO_2 were taken form the seawater loop at all whole and half stations except 9, 11½, and 12½ (the latter two were omitted due to the seawater loop not working). At Station 4, all samples were taken by bucket and at Station 6 duplicate loop and bucket samples were taken.

Surface tarball tows were made at Stations 2, 4, and 6 only, due to highwinds at later stations.

The thermosalinograph and the surface temperature recorder were run continuously.

Mechanical BT or XBT's were taken at all half stations and at whole Stations 8, 10, and 12 (Station 9 was missed by the bridge).

No samples were collected at Station 10½ since the bridge did not inform the oceanographer of the ship's position.

At Station P the oceanographic program was carried out as follows:

I. Physical Oceanography

1) Profiles of salinity, temperature and oxygen were obtained from 6 hydrographic stations to near bottom (4200 metres).

2) 39 STP profiles to 1500 metres were obtained.

3) BT's were taken every three hours to coincide with meteorological observations, encoded and transmitted according to the IGOSS format.

4) Salinity samples daily at 0000 hrs GMT from the seawater loop.

II. Marine Geochemistry

1) Nutrient and salinity samples were collected daily at 0000 hrs GMT from the seawater loop. One 24 hour series of nutrient samples were taken each hour from the seawater loop. One profile for nutrient samples to 500 m and one profile for tritium to 500 m were taken.

2) Alkalinity and total CO_2 samples were taken every 1 to 3 days from the seawater loop and in addition 2 profiles to 500 m were taken.

3) Air CO_2 samples were taken in quadruplicate at weekly intervals.

4) 7 surface tarball tows were completed.

5) 2 seawater C-14 samples were extracted from 45 gallons of seawater taken from the seawater loop along with 2 seawater C-13 and 2 air C-13 samples.

III. Biological and Productivity

Samples were obtained as follows:

1) 37 - 150 metre vertical plankton hauls.
   2 - 1200 metre vertical plankton hauls.

2) 2 profiles for each of plant pigment, nitrate and C_{14} productivity were obtained and additional surface samples were taken once.

En route from Station P, an STD was made at Stations 12,10, 5, and 4 only and one hydrocast was done at Station 12. Nutrient and nitrate samples were taken from the seawater loop at Stations 12 - 3. Salinity samples were taken at all whole and half stations 12½ to 3.

Observations and Other Agencies

1) Marine mammal observations were made by the ship's officers for Mr. I. McAskie, Fisheries Research Board of Canada, Pacific Biological Station, Nanaimo, B.C., Canada.

2) Bird observations were made by the ship's officers for Dr. M. Myres, University of Alberta, Calgary, Alberta, Canada and Mr. J. Guiguet, Curator of Birds and Mammals, Provincial Museum, Department of Recreation and Conservation, Victoria, British Columbia, Canada.

3) Air CO_2 samples weekly in duplicate for Scripps Institution of Oceanography La Jolla, San Diego, California, U.S.A.

Data was processed for publication by Ms. M. Sainsbury of Seakem Oceanographic Ltd., Victoria, B.C.

OBSERVATIONAL PROCEDURES

Observations for salinity, oxygen and temperature from all hydrographic casts, including the surface, were obtained with Niskin water sample bottles equipped with either Richter and Wiese and/or Yoshino Keiki Co. reversing thermometers. Two protected thermometers were used on all bottles, and one unprotected thermometer was used on each bottle at depths of 300 m or greater. The accuracy of protected reversing thermometers is believed to be $\pm$ 0.02^{o}C.

The daily surface water temperatures were measured from a bucket sample using a deck thermometer of $\pm$ 0.1^{o}C accuracy. The daily surface salinity samples were obtained from the seawater loop. When the seawater loop was not operational these samples were obtained with a bucket, and are indicated with a "b" in this data record.

Salinity determinations were made aboard ship with either an Autolab Model 601 Mark III inductive salinometer or a Hytech Model 6220 lab salinometer. Accuracy using duplicate determinations is estimated to be $\pm$ 0.003 ^{o}/oo.

Depth determinations were made using the "depth difference" method described in the U.S.N. Hydrographic Office Publication No. 607 (1955). Depth estimates have an approximate accuracy of $\pm$ 5 m for depths less than 1000 m, and $\pm$ 0.5% of depth for depths greater than 1000 m.

The dissolved oxygen analysis were done in the shipboard laboratory by a modified Winkler method (Carpenter, 1965).

Line P engine intake continuous temperatures were recorded by a Honeywell Electronik 15 Recorder. The temperature probe is at a depth of approximately 3 metres below the sea surface and the instrument accuracy is believed to be $\pm$ 0.1^{o}C.

Each ship is equipped with a Plessey Model 660-T thermosalinograph which is used, on Line P, for continuous recording of surface temperatures and salinities from the ship's seawater loop. The temperature probe is mounted at the seawater loop intake (approximately 3 metres below the surface) and the salinity probe and recorder are situated in the dry lab. The accuracy of this instrument is believed to be $\pm$ 0.1 ^{o}/oo.

STP profiles were taken with a Plessey Model 9006 STP system.

COMPUTATIONS

All hydrographic data were processed with the aid of an IBM 370

computer. Reversing thermometer temperature corrections, thermometric depth calculations, and accepted depth from the "depth difference" method were computed. Extraneous thermometric depths caused by thermometer malfunctions are automatically edited and replaced. A Calcomp 565 Offline Plotter was used to plot temperature-salinity and temperature-oxygen diagrams, as well as plots of temperature, salinity, and dissolved oxygen vs $\log_{10}$ depth. These plots were used to check the data for errors.

Missing hydrographic data were obtained using a weighted parabolas interpolation method (Reiniger and Ross, 1968). These data are indicated with an asterisk in this data record.

Data values which we suspect but which we have included in this data record are indicated with a plus. These data have been removed from punch card and magnetic tape records.

Analog records from the salinity-temperature-pressure instrument have been machine digitized, then replotted using the Calcomp plotter.

Digitization was continued until original and computer plotted traces were coincident. Temperature and salinity values were listed at standard pressures; integrals (depths, geopotential anomaly, and potential energy anomaly) were computed from the entire array of digitized data.

The headings for the data listing are explained as follows:

PRESS	is pressure (decibars)
TEMP	is temperature (degrees Celsius)
SAL	is salinity (parts per thousand)
DEPTH	is reported in metres
SIGMA-T	is specific gravity anomaly
SVA	is specific volume anomaly
THETA	is potential temperature (degrees Celsius)
SVA (THETA)	is potential specific volume anomaly
DELTA D	is geopotential anomaly (J/kg)
POT EN	is potential energy in units of 10^8 ergs/cm^2
OXY	is the concentration of dissolved oxygen expressed in millilitres per litre
B-V PERIOD	is the Brunt-Vaisala period in minutes

REFERENCES

Carpenter, J.H., 1965. The Chesapeake Bay Institute technique for the Winkler dissolved oxygen method. Limnol. and Oceanogr., 10: 141-143.

Collins, C.A., R.L. Tripe, D.A. Healy and J. Joergensen, 1969. The time distribution of serial oceanographic data from the Ocean Station P programme. Fish. Res. Bd. Can. Tech. Rept. No. 106.

Reiniger, R.F. and C.K. Ross, 1968. A method of interpolation with application to oceanographic data. Deep Sea Res., 15: 185-193.

U.S.N. Hydrographic Office, 1955. Instruction manual for oceanographic observations, Publ. No. 607.

LIST OF FIGURES

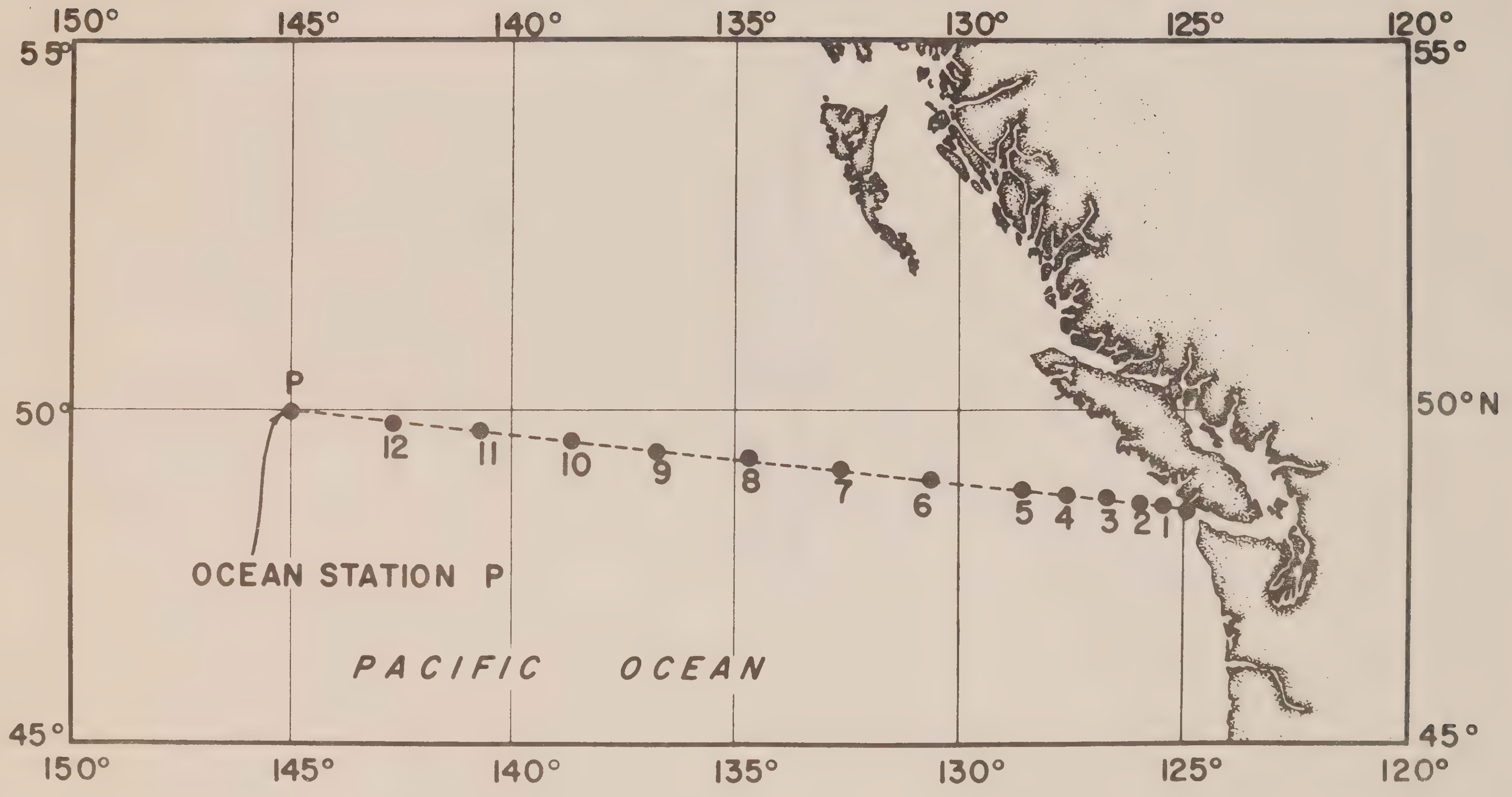


Fig. 1 Chart showing Line P station positions.

Oceanographic Data Obtained on Cruise P-76-4

(CODC Reference No. 15-76-004)

Results of Hydrographic Observations

(P-76-4)

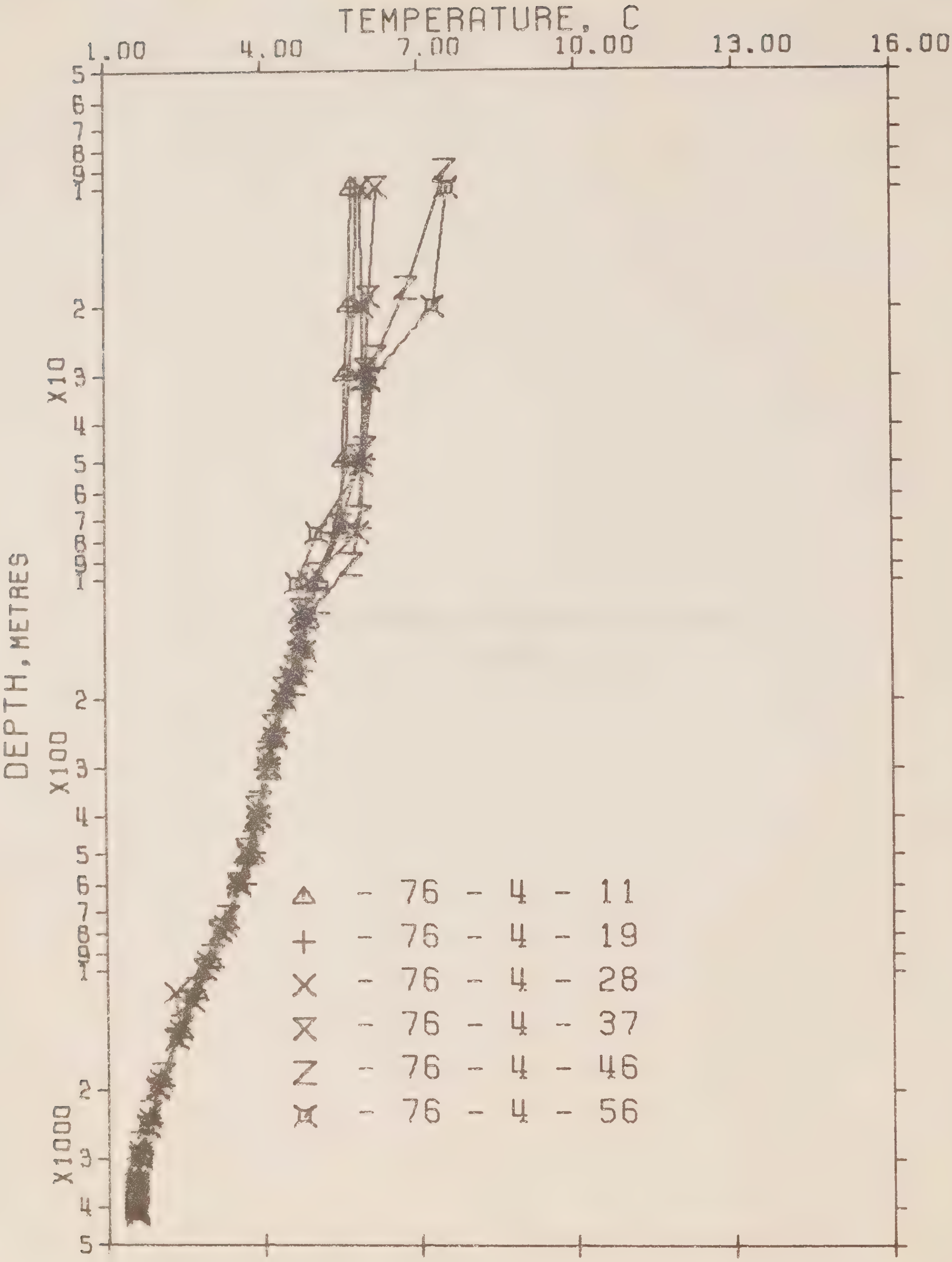
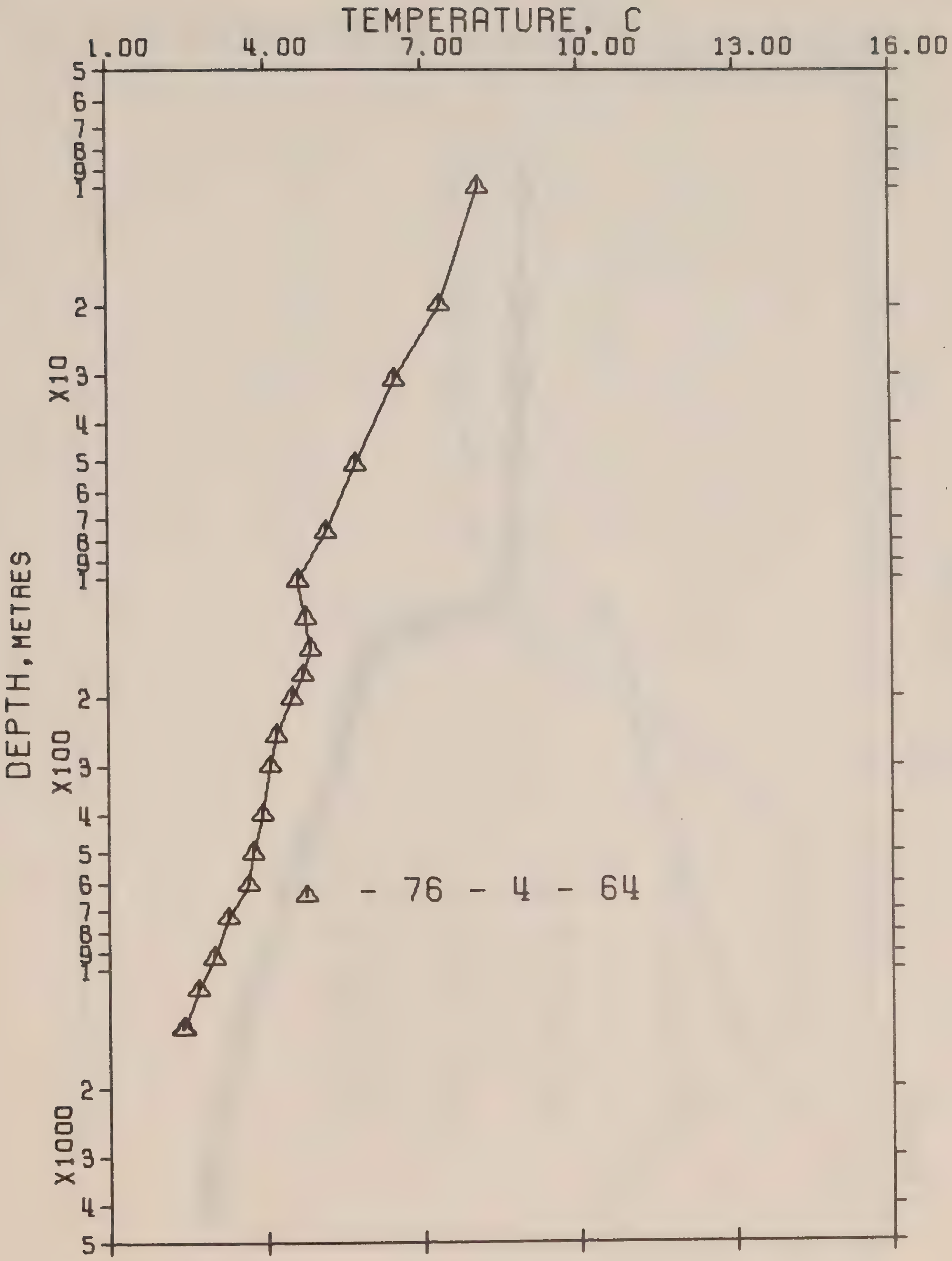


Fig. 2 Composite plot of temperature vs $\log_{10}$ depth for Station P. P-76-4


TEMPERATURE, C
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4.00
7.00
10.00
13.00
16.00
DEPTH, METRES
X10
X100
X1000
△ - 76 - 4 - 64

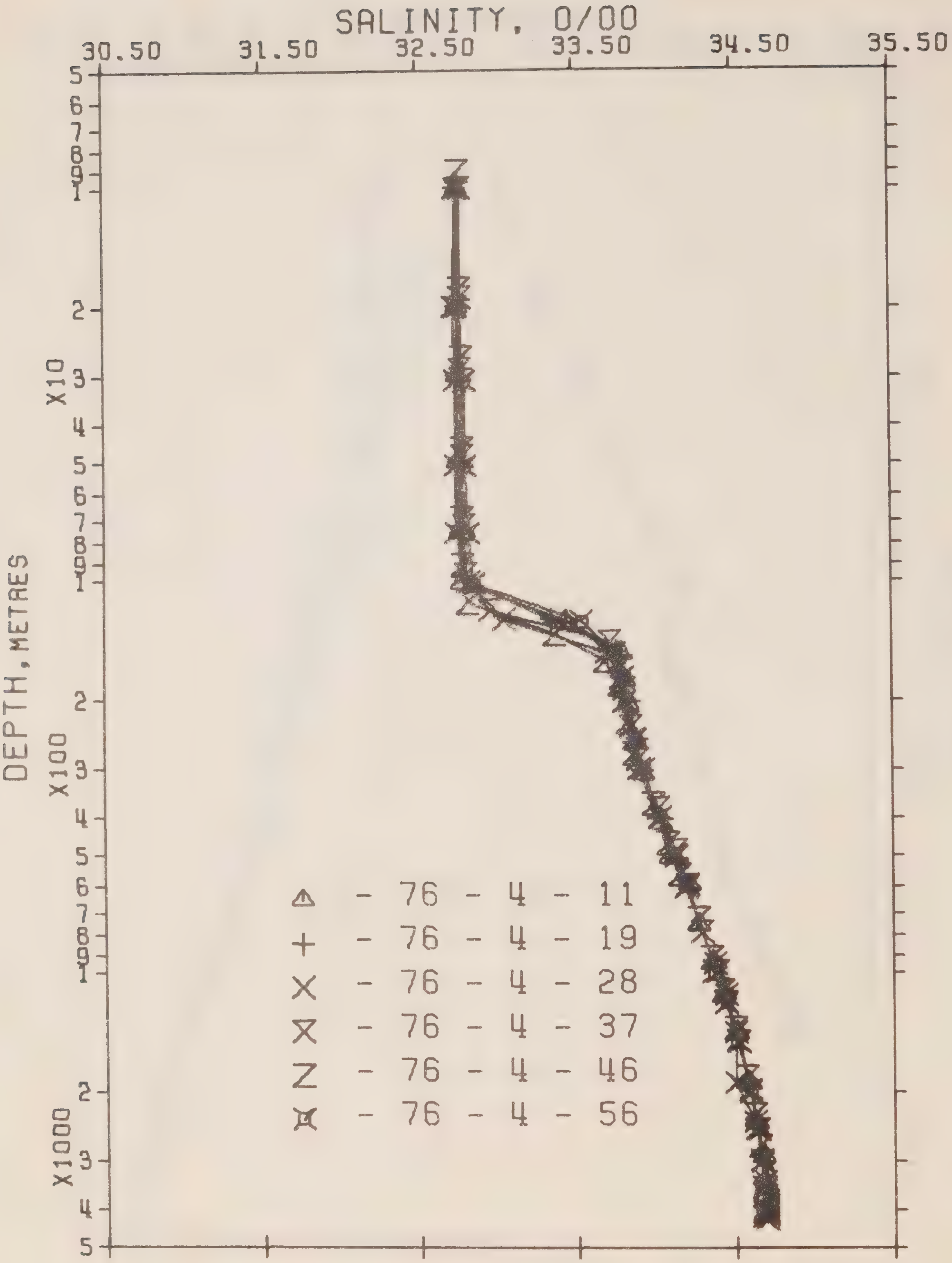
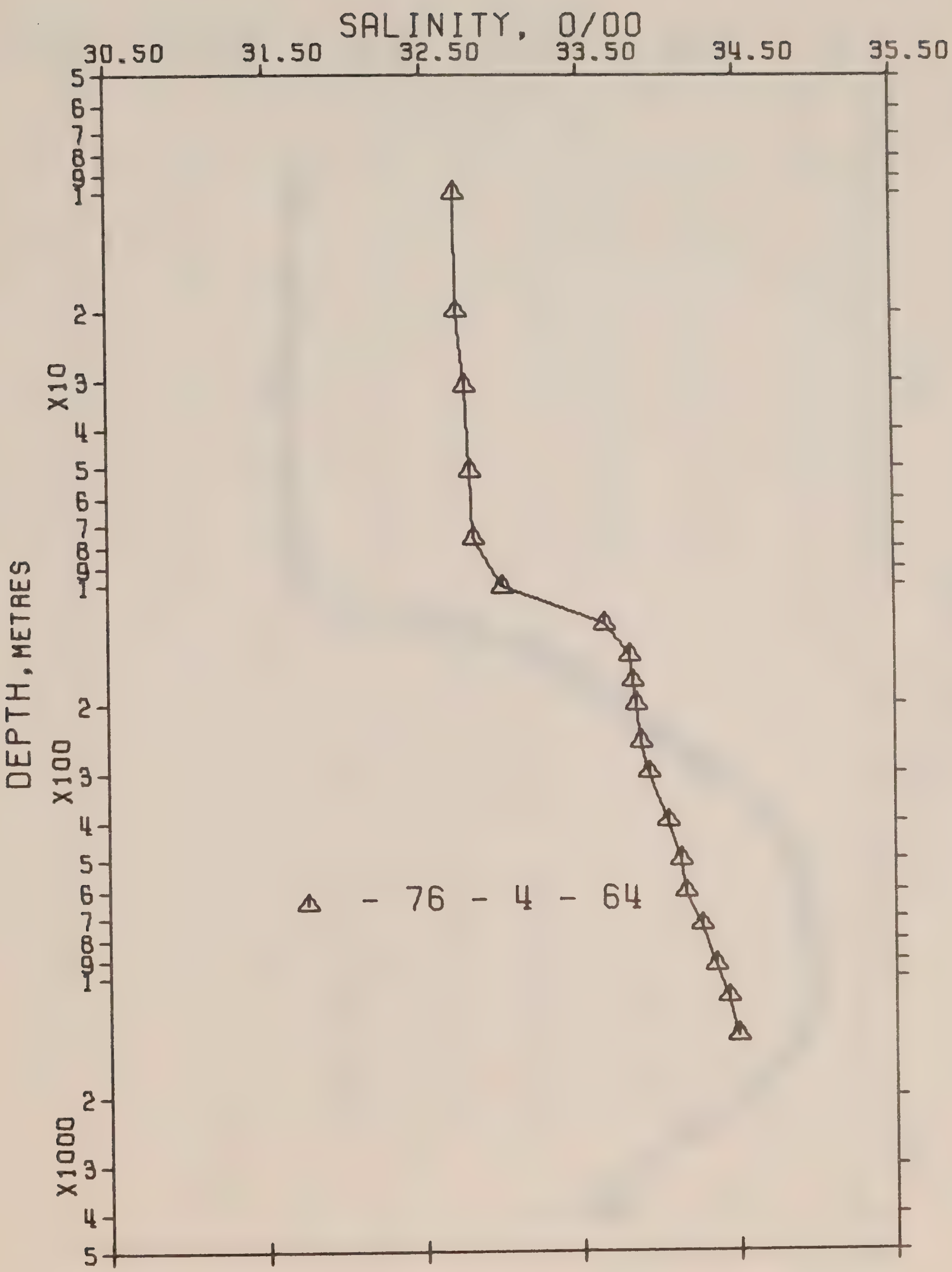


Fig 3 Composite plot of salinity vs $\log_{10}$ depth for Station P.
P-76-4


SALINITY, O/OO
30.50
31.50
32.50
33.50
34.50
35.50
DEPTH, METRES
X10
X100
X1000
- 76 - 4 - 64

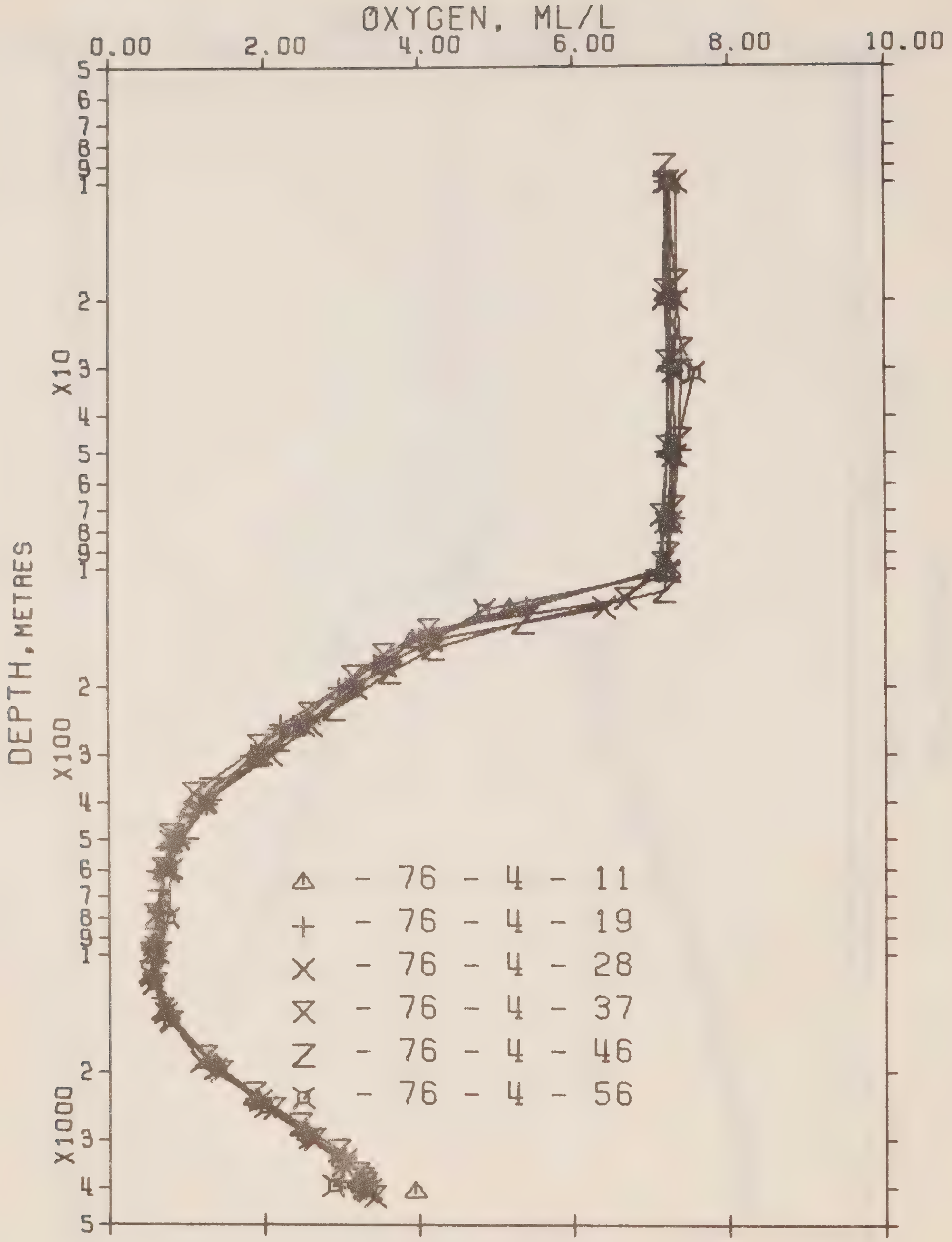
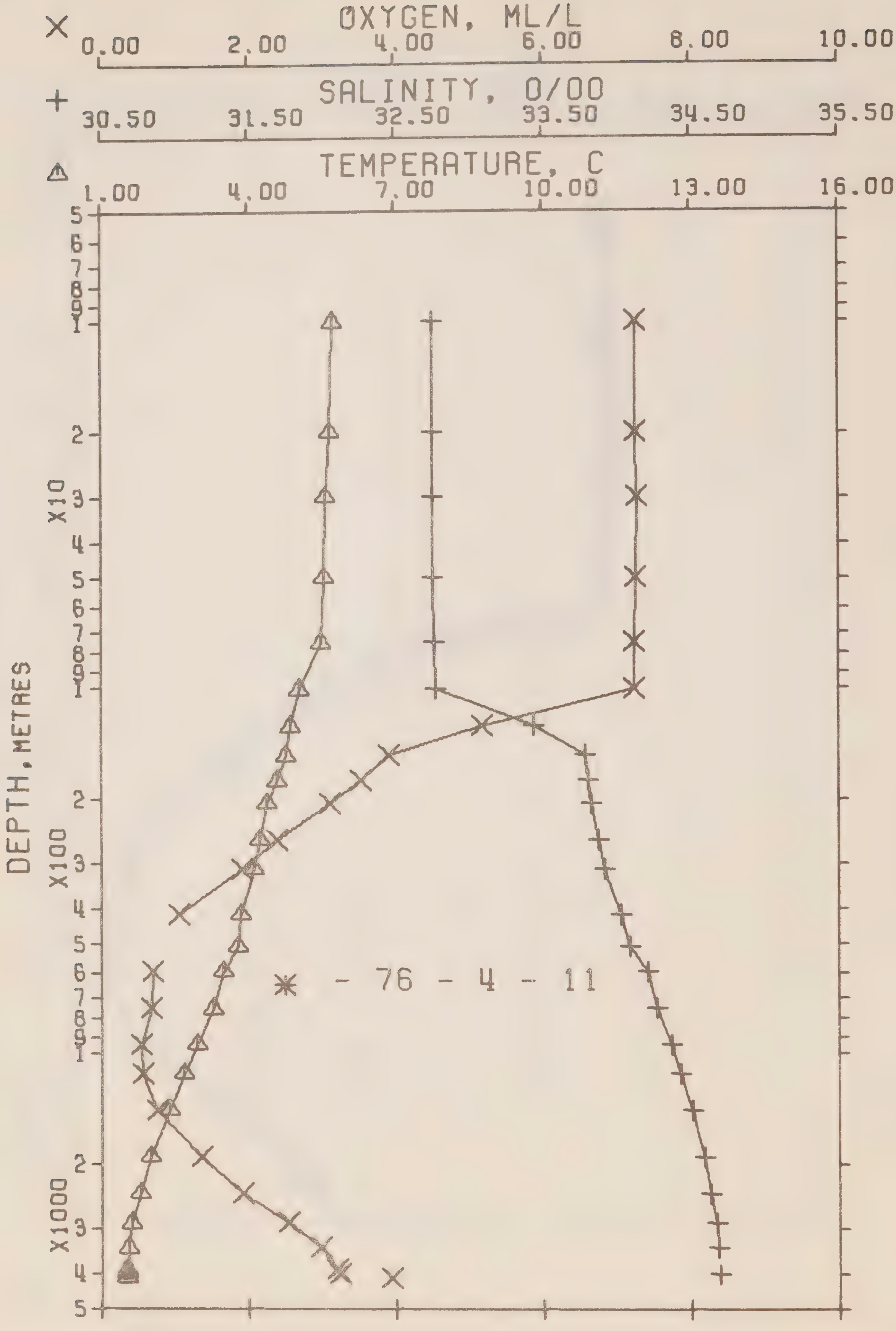


Fig. 4 Composite plot of oxygen vs $\log_{10}$ depth for Station P. P-76-4


OXYGEN, ML/L
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2.00
4.00
6.00
8.00
10.00
SALINITY, 0/00
30.50
31.50
32.50
33.50
34.50
35.50
TEMPERATURE, C
1.00
4.00
7.00
10.00
13.00
16.00
DEPTH, METRES
X10
X100
X1000
* - 76 - 4 - 11

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 11 DATE 12/ 5/76 GMT 17.8
POSITION 50- 0.0 N, 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	5.77	32.760	0	25.837	217.3	5.77	217.1	0.0	0.0		1471.
10	5.74	32.759	10	25.840	217.1	5.74	216.8	0.22	0.01	7.26	1471.
20	5.67	32.762	20	25.851	216.2	5.67	215.9	0.44	0.04	7.27	1471.
30	5.59	32.763	30	25.861	215.3	5.59	214.8	0.65	0.10	7.28	1471.
50	5.56	32.763	50	25.865	215.2	5.56	214.4	1.09	0.28	7.25	1471.
75	5.50	32.766	75	25.874	214.5	5.49	213.5	1.63	0.63	7.24	1471.
100*	5.07	32.778	100	25.934	209.1	5.06	207.8	2.15	1.09	7.23	1470.
102	5.04	32.779	101	25.937	208.7	5.03	207.6	2.18	1.13	7.23	1470.
125*	4.89	33.375	124	26.425	162.6	4.88	161.1	2.63	1.64	5.38	1470.
128	4.87	33.440	127	26.479	157.6	4.86	156.0	2.67	1.70	5.17	1470.
150*	4.78	33.736	149	26.723	134.7	4.77	132.9	2.99	2.15	4.09	1471.
154	4.77	33.786	153	26.764	130.8	4.76	129.0	3.05	2.23	3.91	1471.
175*	4.64	33.806	174	26.794	128.1	4.63	126.1	3.31	2.68	3.60	1471.
180	4.61	33.811	179	26.802	127.5	4.60	125.4	3.38	2.80	3.53	1471.
200*	4.45	33.826	199	26.831	124.9	4.44	122.6	3.63	3.28	3.23	1470.
207	4.40	33.832	206	26.841	124.0	4.38	121.6	3.72	3.48	3.12	1470.
225*	4.34	33.848	225	26.859	122.4	4.33	119.9	3.94	3.95	2.86	1470.
250*	4.27	33.868	249	26.883	120.3	4.25	117.7	4.24	4.69	2.53	1471.
261	4.24	33.876	259	26.893	119.4	4.22	116.7	4.37	5.03	2.40	1471.
300*	4.15	33.907	299	26.927	116.4	4.13	113.4	4.83	6.35	2.04	1471.
314	4.12	33.918	312	26.939	115.5	4.10	112.3	5.00	6.87	1.92	1471.
400*	3.88	34.017	399	27.042	106.3	3.85	102.5	5.95	10.33	1.19	1472.
417	3.84	34.035	414	27.060	104.6	3.81	100.9	6.13	11.09	1.06	1472.
500*	3.79	34.080	497	27.101	101.4	3.75	96.9	6.98	15.05	0.88	1473.
513	3.78	34.086	509	27.107	101.0	3.74	96.2	7.11	15.75		1473.
598	3.49	34.207	593	27.231	89.5	3.45	84.4	7.92	20.31	0.71	1473.
600*	3.49	34.208	595	27.232	89.4	3.45	84.3	7.94	20.41	0.71	1473.
700*	3.35	34.248	698	27.277	85.8	3.30	80.1	8.81	26.22	0.69	1475.
758	3.28	34.268	751	27.300	83.9	3.23	77.8	9.31	29.87	0.68	1475.
800*	3.20	34.291	797	27.326	81.6	3.15	75.4	9.65	32.64	0.65	1476.
900*	3.03	34.342	896	27.382	76.6	2.97	69.9	10.44	39.48	0.57	1477.
951	2.95	34.366	942	27.409	74.4	2.89	67.4	10.83	43.12	0.53	1477.
1000*	2.88	34.384	994	27.429	72.5	2.81	65.4	11.19	46.69	0.54	1478.
1146	2.68	34.432	1134	27.485	67.6	2.60	60.1	12.21	57.82	0.56	1479.
1200*	2.62	34.447	1193	27.503	66.2	2.54	58.5	12.57	62.18	0.60	1480.
1442	2.37	34.506	1426	27.571	60.3	2.27	51.9	14.10	82.71	0.75	1483.
1500*	2.32	34.518	1492	27.584	59.1	2.22	50.6	14.45	87.93	0.84	1484.
1939	1.98	34.592	1916	27.671	51.6	1.85	42.2	16.85	130.01	1.37	1490.
2000*	1.95	34.597	1982	27.677	51.2	1.82	41.5	17.16	136.27	1.44	1491.
2443	1.78	34.633	2411	27.719	48.1	1.61	37.3	19.36	186.10	1.91	1497.
2500*	1.76	34.637	2471	27.724	47.7	1.58	36.9	19.63	192.94	1.99	1498.
2953	1.61	34.666	2910	27.758	45.1	1.39	33.4	21.72	250.98	2.53	1505.
3000*	1.60	34.667	2960	27.760	45.0	1.38	33.2	21.93	257.47	2.58	1506.
3463	1.53	34.681	3409	27.776	44.3	1.26	31.4	24.00	325.38	2.99	1514.
3500*	1.53	34.682	3448	27.777	44.3	1.26	31.3	24.16	331.22	3.00	1514.
3973	1.52	34.691	3907	27.785	44.9	1.20	30.2	26.28	411.77	3.20	1522.
4000*	1.52	34.692	3933	27.786	44.9	1.20	30.1	26.40	416.65	3.21	1523.
4075	1.52	34.693	4006	27.787	45.0	1.19	29.9	26.73	430.48	3.25	1524.
4100*	1.52	34.695	4031	27.788	45.0	1.19	29.8	26.85	435.19	3.42	1524.
4166	1.52	34.699	4095	27.792	44.8	1.18	29.5	27.14	447.72		1526.
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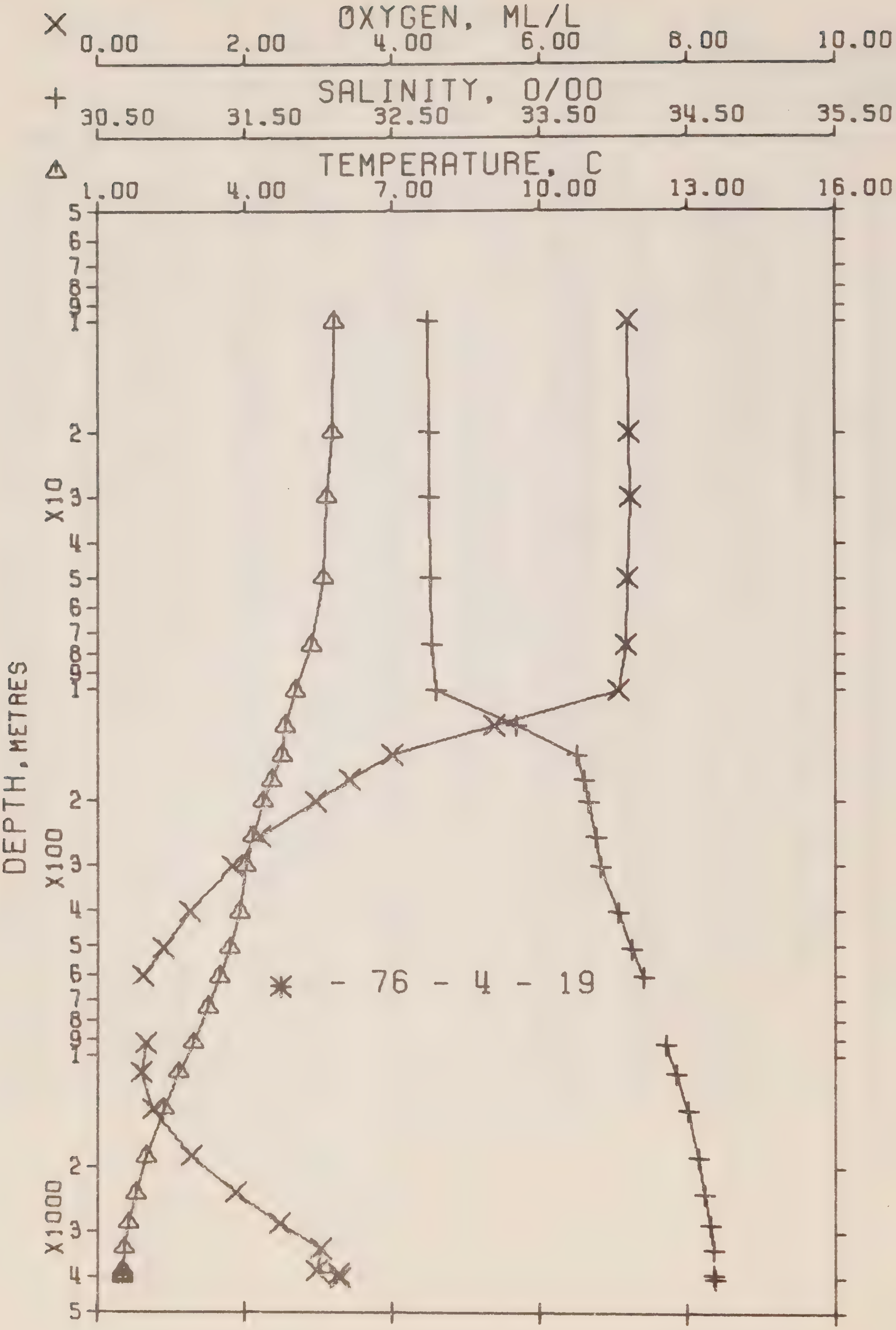
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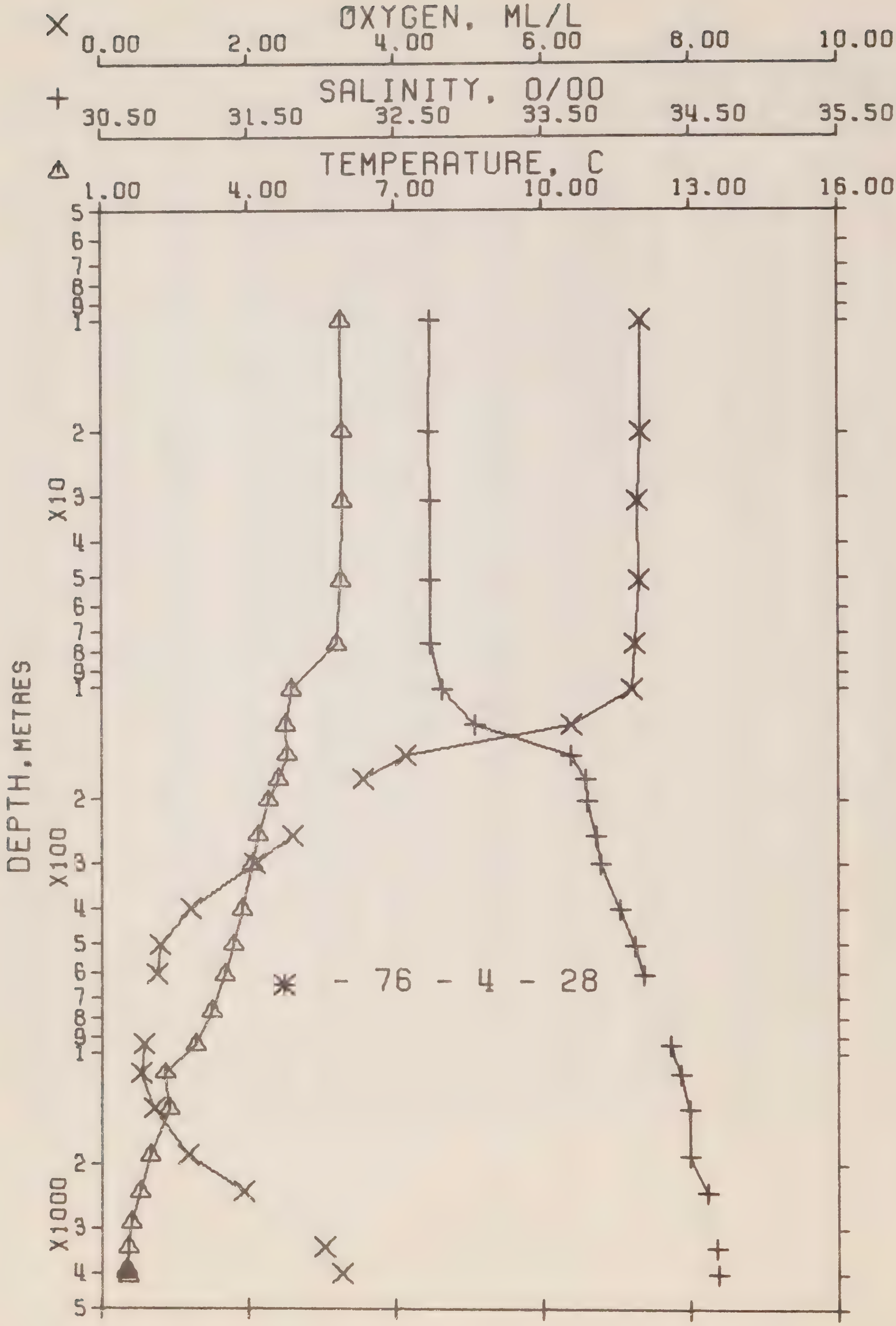
0.00
2.00
4.00
6.00
8.00
10.00
SALINITY, 0/00
30.50
31.50
32.50
33.50
34.50
35.50
TEMPERATURE, C
1.00
4.00
7.00
10.00
13.00
16.00
DEPTH, METRES
X10
X100
X1000
* - 76 - 4 - 19

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 19 DATE 18/ 5/76 GMT 17.7
POSITION 50- 0.0 N. 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	5.89	32.753	0	25.817	219.2	5.89	219.0	0.0	0.0	7.22	1472.
10	5.84	32.753	10	25.823	218.8	5.84	218.4	0.22	0.01	7.20	1472.
20	5.79	32.757	20	25.833	218.0	5.79	217.5	0.44	0.05	7.22	1472.
30	5.68	32.763	30	25.851	216.3	5.68	215.8	0.66	0.10	7.24	1471.
50	5.62	32.767	50	25.861	215.5	5.62	214.8	1.09	0.28	7.20	1471.
75*	5.40	32.782	75	25.899	212.2	5.39	211.2	1.62	0.62	7.17	1471.
77	5.39	32.783	76	25.900	212.1	5.38	211.0	1.65	0.64	7.17	1471.
100*	5.08	32.809	100	25.957	206.9	5.07	205.7	2.15	1.08	7.09	1470.
102	5.06	32.811	101	25.960	206.5	5.05	205.3	2.18	1.12	7.08	1470.
125*	4.86	33.314	124	26.380	166.9	4.85	165.4	2.62	1.63	5.52	1470.
127	4.85	33.350	126	26.410	164.2	4.84	162.5	2.66	1.67	5.40	1470.
150*	4.79	33.726	149	26.715	135.5	4.77	133.7	3.00	2.16	4.12	1471.
152	4.78	33.756	151	26.739	133.2	4.77	131.3	3.03	2.20	4.02	1471.
175*	4.59	33.805	174	26.799	127.7	4.57	125.6	3.32	2.69	3.51	1471.
178	4.56	33.811	177	26.807	126.9	4.55	124.9	3.36	2.76	3.44	1471.
200*	4.40	33.834	199	26.842	123.8	4.39	121.6	3.63	3.29	3.03	1470.
203	4.38	33.837	202	26.847	123.3	4.37	121.1	3.68	3.38	2.97	1470.
225*	4.28	33.861	225	26.876	120.7	4.27	118.3	3.94	3.95	2.63	1470.
250*	4.18	33.885	249	26.906	118.1	4.17	115.5	4.24	4.67	2.27	1470.
254	4.17	33.889	252	26.910	117.7	4.15	115.0	4.28	4.79	2.22	1470.
300*	4.05	33.919	298	26.946	114.6	4.03	111.6	4.82	6.30	1.88	1471.
305	4.04	33.922	303	26.950	114.2	4.02	111.2	4.88	6.49	1.84	1471.
400*	3.92	34.035	398	27.052	105.3	3.89	101.5	5.92	10.23	1.30	1472.
408	3.91	34.044	405	27.060	104.6	3.88	100.8	6.01	10.59	1.26	1472.
500*	3.71	34.124	497	27.144	97.3	3.68	92.8	6.93	14.87	0.93	1473.
511	3.69	34.133	507	27.153	96.5	3.65	91.9	7.04	15.43	0.89	1473.
600*	3.51	34.199	596	27.224	90.3	3.47	85.1	7.87	20.12	0.65	1473.
614	3.48	34.209	609	27.234	89.4	3.44	84.1	8.00	20.92	0.62	1474.
700*	3.32	34.256	696	27.287	84.8	3.28	79.2	8.74	25.91	0.63	1474.
745	3.25	34.279	738	27.311	82.6	3.20	76.7	9.12	28.67		1475.
800*	3.16	34.305	797	27.341	80.1	3.10	73.9	9.57	32.21		1475.
900*	3.00	34.348	894	27.389	75.9	2.94	69.3	10.35	38.96	0.55	1476.
934	2.95	34.361	925	27.405	74.6	2.89	67.9	10.60	41.35	0.66	1477.
1000*	2.84	34.388	994	27.436	71.8	2.77	64.9	11.09	46.12	0.64	1477.
1125	2.65	34.434	1114	27.489	67.1	2.57	59.7	11.96	55.52	0.61	1479.
1200*	2.57	34.454	1194	27.513	65.0	2.49	57.5	12.45	61.37	0.65	1480.
1415	2.35	34.506	1400	27.572	60.0	2.25	51.8	13.79	79.24	0.76	1482.
1500*	2.28	34.521	1494	27.590	58.4	2.18	50.1	14.29	86.70	0.86	1484.
1909	1.99	34.582	1886	27.662	52.4	1.86	43.0	16.54	125.78	1.27	1489.
2000*	1.95	34.590	1984	27.672	51.6	1.81	42.0	17.02	135.22	1.40	1491.
2409	1.79	34.624	2377	27.711	48.7	1.62	38.1	19.06	181.22	1.88	1497.
2500*	1.76	34.630	2474	27.719	48.1	1.58	37.3	19.50	192.28	2.00	1498.
2913	1.62	34.656	2871	27.750	45.8	1.41	34.3	21.44	245.59	2.48	1505.
3000*	1.61	34.660	2962	27.754	45.5	1.38	33.7	21.84	257.60	2.59	1506.
3416	1.54	34.679	3363	27.774	44.4	1.28	31.6	23.70	318.49	3.05	1513.
3500*	1.54	34.680	3450	27.775	44.6	1.27	31.5	24.07	331.70	3.03	1514.
3914	1.52	34.684	3849	27.780	45.2	1.21	30.7	25.93	402.03	2.97	1521.
4000*	1.51	34.685	3933	27.781	45.2	1.19	30.6	26.32	417.75	3.24	1523.
4013	1.51	34.685	3946	27.781	45.2	1.19	30.6	26.38	420.20	3.28	1523.
4100*	1.52	34.686	4031	27.781	45.5	1.18	30.5	26.78	436.48	3.31	1524.
4102	1.52	34.686	4032	27.781	45.5	1.18	30.5	26.79	436.78	3.31	1525.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DEPTH, METRES
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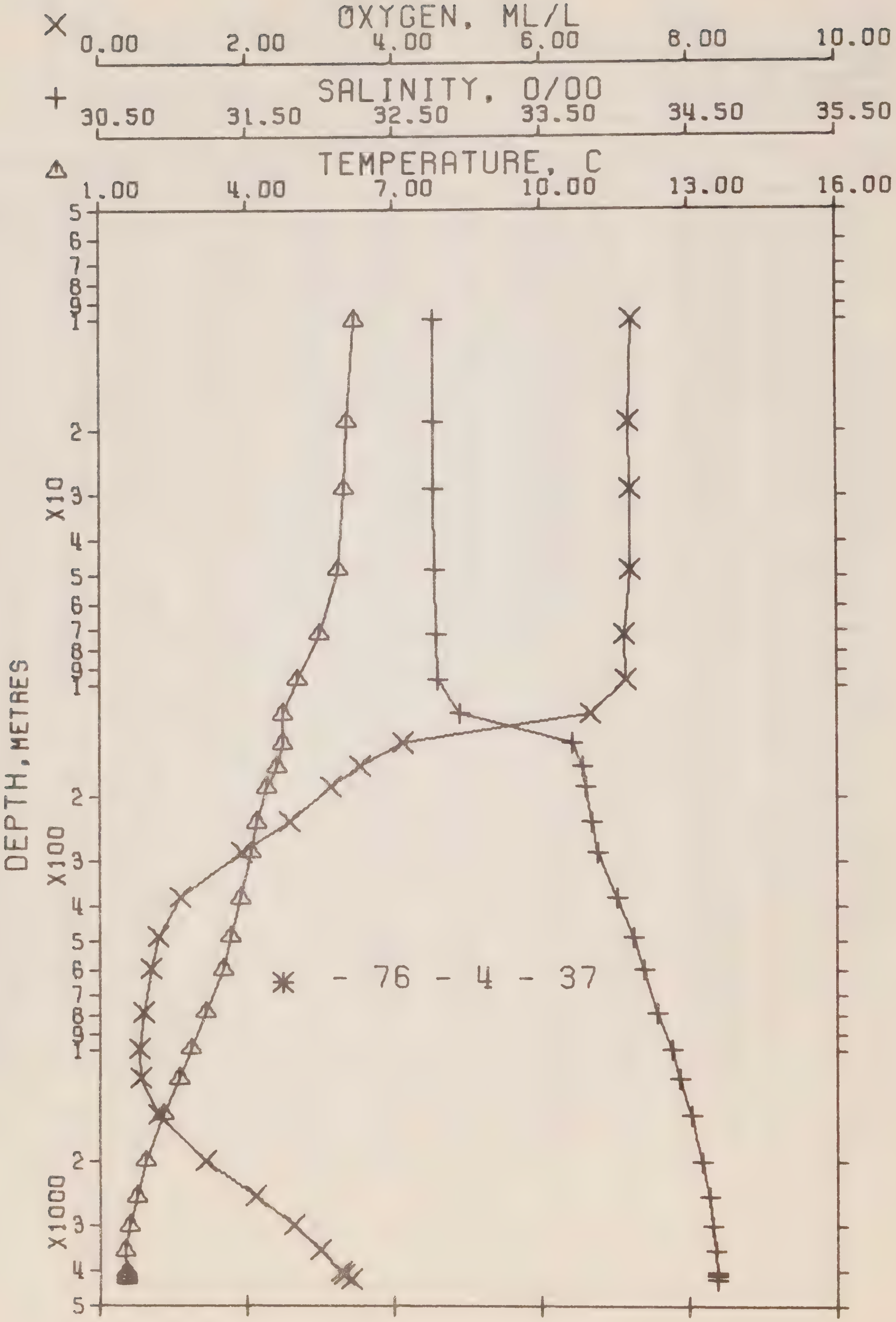
* - 76 - 4 - 28

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 28 DATE 25/ 5/76 GMT 17.6
POSITION 50- 0.0 N. 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	5.94	32.741	0	25.802	220.6	5.94	220.4	0.0	0.0	7.36	1472.
10	5.92	32.746	10	25.808	220.2	5.92	219.9	0.22	0.01	7.33	1472.
20	5.95	32.742	20	25.801	221.0	5.95	220.5	0.44	0.05	7.33	1472.
30*	5.95	32.746	30	25.804	220.8	5.95	220.1	0.66	0.10	7.31	1472.
31	5.95	32.746	31	25.805	220.7	5.95	220.1	0.69	0.11	7.31	1472.
50*	5.93	32.749	50	25.809	220.6	5.93	219.7	1.10	0.28	7.32	1473.
51	5.93	32.749	51	25.809	220.5	5.93	219.7	1.13	0.30	7.32	1473.
75*	5.83	32.754	75	25.825	219.3	5.83	218.2	1.65	0.63	7.27	1473.
76	5.83	32.754	76	25.825	219.3	5.82	218.2	1.69	0.66	7.27	1473.
100*	4.94	32.822	100	25.982	204.5	4.94	203.3	2.19	1.11	7.23	1470.
102	4.89	32.826	101	25.991	203.6	4.88	202.4	2.22	1.14	7.23	1469.
125*	4.78	33.038	124	26.171	186.7	4.77	185.3	2.68	1.67	6.46	1470.
127	4.77	33.053	126	26.184	185.5	4.76	184.1	2.71	1.71	6.41	1470.
150*	4.81	33.634	149	26.640	142.5	4.79	140.7	3.10	2.26	4.41	1471.
153	4.81	33.704	152	26.695	137.4	4.80	135.6	3.14	2.32	4.17	1471.
175*	4.65	33.791	174	26.781	129.3	4.64	127.3	3.43	2.80	3.65	1471.
178	4.63	33.803	177	26.793	128.3	4.62	126.2	3.47	2.98	3.57	1471.
200*	4.45	33.806	199	26.815	126.3	4.43	124.1	3.74	3.41	3.26	1470.
203	4.42	33.806	202	26.818	126.1	4.41	123.8	3.79	3.50		1470.
225*	4.33	33.833	225	26.849	123.3	4.31	120.8	4.06	4.08		1470.
250*	4.23	33.862	249	26.882	120.4	4.22	117.8	4.36	4.82		1470.
254	4.22	33.866	252	26.887	120.0	4.20	117.3	4.41	4.94	2.62	1470.
300*	4.10	33.895	298	26.923	116.8	4.08	113.9	4.95	6.48	2.15	1471.
304	4.09	33.898	302	26.926	116.6	4.07	113.5	5.00	6.63	2.11	1471.
400*	3.90	34.029	397	27.049	105.6	3.87	101.8	6.07	10.46	1.25	1472.
405	3.89	34.035	402	27.055	105.1	3.86	101.2	6.12	10.69	1.21	1472.
500*	3.70	34.120	497	27.141	97.5	3.67	93.0	7.08	15.10	0.84	1473.
508	3.69	34.127	504	27.148	97.0	3.65	92.3	7.16	15.51	0.81	1473.
600*	3.53	34.186	596	27.211	91.5	3.49	86.4	8.02	20.39	0.76	1474.
612	3.51	34.193	607	27.218	90.9	3.47	85.7	8.14	21.08	0.76	1474.
700*	3.35	34.246	698	27.275	85.9	3.30	80.1	8.91	26.27	0.70	1475.
771	3.24	34.284	764	27.316	82.3	3.19	76.3	9.51	30.74		1475.
800*	3.19	34.298	795	27.333	80.9	3.13	74.7	9.75	32.64		1476.
900*	3.02	34.345	896	27.385	76.3	2.96	69.7	10.53	39.45		1477.
957	2.93	34.369	948	27.413	73.9	2.86	67.0	10.96	43.52	0.57	1477.
1000*	2.78	34.386	993	27.440	71.3	2.71	64.5	11.27	46.62	0.57	1477.
1146	2.30	34.437	1134	27.521	63.2	2.23	56.7	12.24	57.20	0.55	1478.
1200*	2.31	34.450	1193	27.530	62.7	2.24	55.8	12.58	61.30	0.59	1479.
1436	2.37	34.500	1420	27.566	60.7	2.27	52.1	14.04	80.80	0.72	1483.
1500*	2.31	34.500	1492	27.571	60.3	2.21	51.8	14.43	86.64	0.79	1484.
1930	1.98	34.503	1907	27.600	58.1	1.85	48.9	17.00	131.78	1.18	1489.
2000*	1.95	34.521	1983	27.617	56.7	1.81	47.3	17.40	139.81	1.30	1490.
2435	1.77	34.620	2403	27.710	48.9	1.60	38.2	19.67	190.93	1.95	1497.
2500*	1.75	34.624	2472	27.715	48.5	1.57	37.8	19.98	198.86	2.03	1498.
2947	1.61	34.651	2905	27.746	46.1	1.39	34.5	22.09	257.47		1505.
3000*	1.60	34.654	2960	27.749	45.9	1.38	34.2	22.34	264.81		1506.
3460	1.53	34.677	3406	27.773	44.6	1.26	31.6	24.40	332.80	3.04	1514.
3500*	1.53	34.678	3448	27.774	44.7	1.26	31.6	24.58	339.18	3.06	1514.
3967	1.52	34.685	3901	27.780	45.3	1.20	30.6	26.68	419.14		1522.
4000*	1.52	34.685	3933	27.780	45.4	1.20	30.6	26.83	425.20		1523.
4068	1.52	34.686	3999	27.781	45.5	1.19	30.5	27.14	437.93	3.28	1524.
4100*	1.52	34.688	4031	27.782	45.5	1.19	30.4	27.29	443.96		1524.
4158	1.53	34.691	4087	27.785	45.5	1.19	30.1	27.55	455.05		1526.



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DEPTH, METRES
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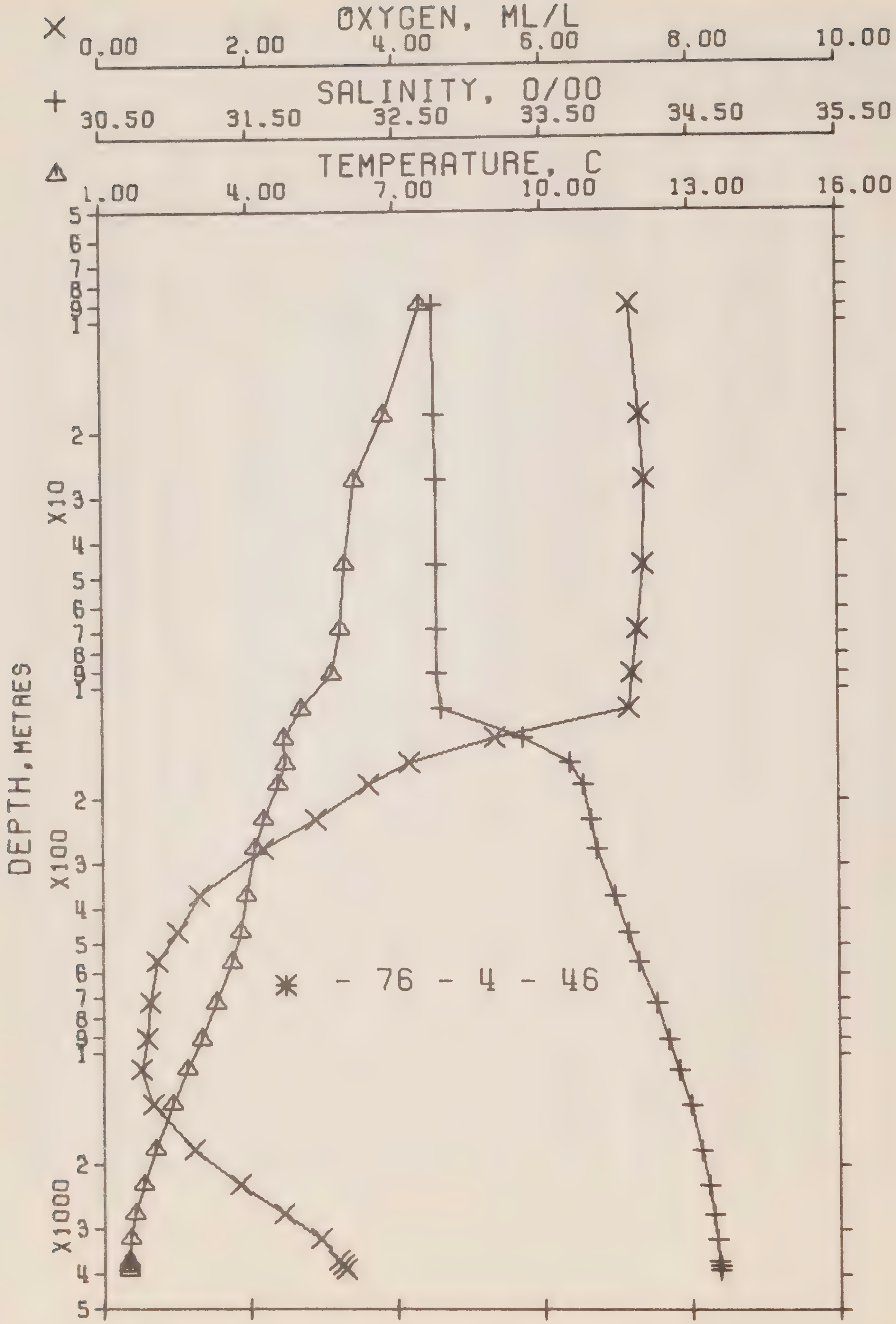
X100
X1000
✳ - 76 - 4 - 37

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 37 DATE 1/ 6/76 GMT 17.9
POSITION 50- 0.0 N. 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	6.40	32.781	0	25.776	223.2	6.40	223.0	0.0	0.0	7.33	1474.
10	6.21	32.777	10	25.797	221.3	6.21	221.0	0.22	0.01	7.23	1473.
19	6.08	32.776	19	25.812	219.9	6.08	219.4	0.42	0.04	7.19	1473.
20*	6.07	32.776	20	25.813	219.8	6.07	219.3	0.44	0.04	7.20	1473.
29	6.01	32.777	29	25.822	219.2	6.01	218.5	0.64	0.10	7.22	1473.
30*	6.00	32.778	30	25.823	219.0	6.00	218.4	0.66	0.10	7.22	1473.
48	5.90	32.791	48	25.846	217.0	5.90	216.2	1.06	0.26	7.22	1473.
50*	5.87	32.792	50	25.851	216.6	5.86	215.7	1.10	0.28	7.21	1472.
72	5.49	32.799	72	25.901	212.0	5.48	210.9	1.58	0.58	7.14	1471.
75*	5.44	32.801	75	25.909	211.3	5.43	210.2	1.63	0.62	7.14	1471.
97	5.04	32.815	96	25.966	206.0	5.03	204.8	2.09	1.02	7.16	1470.
100*	5.00	32.838	100	25.989	203.8	4.99	202.6	2.16	1.09	7.09	1470.
120	4.76	32.962	119	26.113	192.2	4.75	190.8	2.55	1.53	6.68	1469.
125*	4.76	33.136	125	26.251	179.2	4.75	177.8	2.65	1.65	6.09	1470.
144	4.76	33.716	143	26.710	135.9	4.75	134.1	2.94	2.05	4.13	1471.
150*	4.73	33.736	149	26.729	134.1	4.72	132.2	3.02	2.17	3.98	1471.
167	4.64	33.790	166	26.782	129.3	4.63	127.3	3.25	2.54	3.57	1471.
175*	4.56	33.799	174	26.797	127.9	4.55	125.8	3.35	2.72	3.42	1470.
190	4.42	33.815	189	26.825	125.3	4.41	123.2	3.54	3.08	3.16	1470.
200*	4.37	33.824	199	26.837	124.2	4.36	122.0	3.66	3.32	3.04	1470.
225*	4.26	33.844	224	26.865	121.7	4.25	119.3	3.97	3.98	2.73	1470.
238	4.21	33.854	236	26.878	120.5	4.19	118.1	4.13	4.35	2.59	1470.
250*	4.18	33.865	249	26.890	119.5	4.16	116.9	4.27	4.71	2.42	1470.
286	4.09	33.894	284	26.923	116.7	4.07	113.9	4.70	5.88	1.94	1470.
300*	4.06	33.915	300	26.943	114.9	4.04	112.0	4.86	6.36	1.81	1471.
384	3.89	34.025	381	27.047	105.7	3.86	102.0	5.79	9.58	1.09	1471.
400*	3.85	34.043	399	27.065	104.1	3.83	100.3	5.95	10.25	1.04	1471.
489	3.68	34.130	485	27.152	96.4	3.65	92.0	6.84	14.28	0.79	1472.
500*	3.66	34.138	497	27.160	95.8	3.63	91.3	6.95	14.81	0.78	1472.
600*	3.51	34.203	595	27.226	90.1	3.47	84.9	7.87	20.01	0.69	1474.
602	3.51	34.204	597	27.227	90.0	3.47	84.8	7.89	20.13	0.69	1474.
700*	3.32	34.252	700	27.283	85.1	3.27	79.4	8.75	25.82	0.64	1474.
790	3.17	34.291	783	27.329	81.2	3.12	75.1	9.50	31.52	0.60	1475.
800*	3.15	34.296	794	27.334	80.7	3.10	74.5	9.58	32.16	0.59	1475.
900*	2.99	34.348	897	27.390	75.8	2.93	69.2	10.36	38.94	0.56	1476.
997	2.85	34.392	987	27.438	71.6	2.78	64.6	11.07	45.80	0.54	1477.
1000*	2.85	34.393	991	27.439	71.5	2.78	64.5	11.10	46.04	0.54	1478.
1200*	2.62	34.443	1188	27.499	66.5	2.54	58.7	12.48	61.51	0.55	1480.
1203	2.62	34.444	1191	27.500	66.5	2.54	58.6	12.50	61.78	0.55	1480.
1500*	2.30	34.514	1485	27.583	59.2	2.20	50.7	14.37	87.53	0.79	1484.
1513	2.29	34.517	1496	27.586	58.9	2.19	50.4	14.44	88.67	0.80	1484.
2000*	1.96	34.591	1979	27.672	51.7	1.82	42.0	17.09	136.18	1.42	1491.
2028	1.94	34.595	2003	27.677	51.3	1.80	41.6	17.24	139.13	1.45	1491.
2500*	1.76	34.638	2471	27.725	47.5	1.58	36.7	19.56	192.69	2.06	1498.
2544	1.74	34.642	2510	27.730	47.2	1.56	36.3	19.77	198.08	2.11	1499.
3000*	1.61	34.662	2961	27.755	45.5	1.38	33.6	21.87	257.58	2.58	1506.
3062	1.59	34.664	3017	27.758	45.3	1.36	33.4	22.15	266.25	2.64	1507.
3500*	1.53	34.676	3450	27.772	44.8	1.26	31.7	24.12	332.03	2.95	1514.
3581	1.52	34.678	3524	27.775	44.8	1.24	31.5	24.48	345.05	3.00	1516.
4000*	1.53	34.687	3938	27.781	45.4	1.20	30.6	26.37	417.96	3.23	1523.
4100*	1.53	34.689	4031	27.783	45.5	1.19	30.3	26.82	436.70	3.28	1525.
4102	1.53	34.689	4032	27.783	45.5	1.19	30.3	26.83	436.99	3.28	1525.
4200*	1.53	34.689	4128	27.783	45.7	1.18	30.3	27.28	456.00	3.32	1526.
4206	1.53	34.689	4134	27.783	45.8	1.18	30.2	27.31	457.22	3.32	1526.
4301	1.53	34.689	4226	27.783	46.0	1.17	30.2	27.74	476.02	3.41	1528.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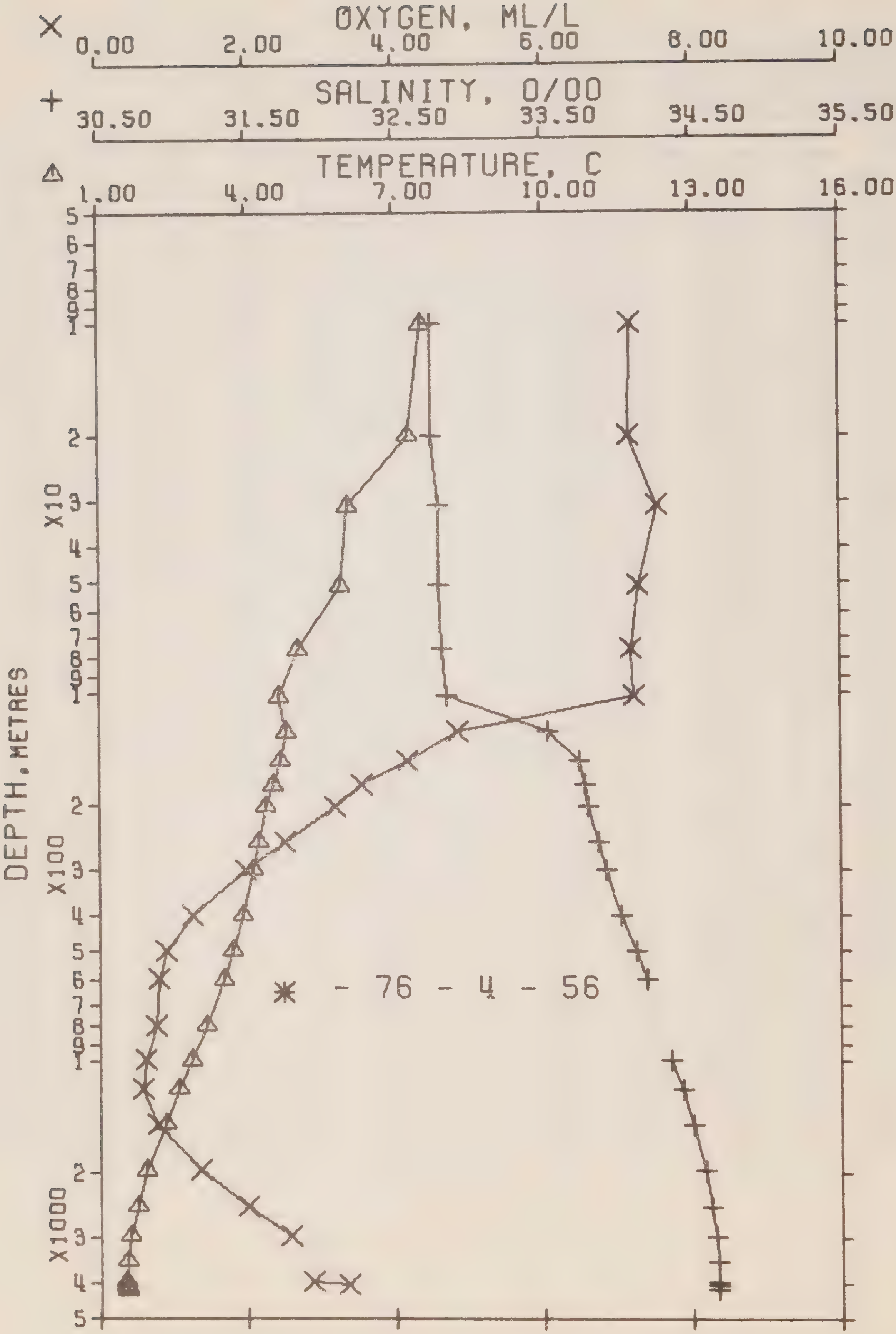
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 46 DATE 8/ 6/76 GMT 17.7
POSITION 50- 0.0 N. 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	7.58	32.769	0	25.608	239.1	7.58	238.9	0.0	0.0	7.23	1478.
9	7.53	32.769	9	25.615	238.5	7.53	238.2	0.22	0.01	7.19	1478.
10*	7.43	32.770	10	25.631	237.1	7.42	236.7	0.24	0.01	7.21	1478.
18	6.78	32.778	18	25.724	228.3	6.78	227.8	0.43	0.04	7.35	1476.
20*	6.64	32.781	20	25.745	226.3	6.64	225.8	0.47	0.05	7.36	1475.
27	6.20	32.792	27	25.810	220.2	6.20	219.7	0.63	0.09	7.41	1473.
30*	6.16	32.791	31	25.815	219.8	6.15	219.2	0.69	0.10	7.40	1473.
46	5.97	32.789	46	25.836	217.9	5.97	217.2	1.05	0.24	7.38	1473.
50*	5.96	32.789	50	25.837	217.8	5.95	217.1	1.13	0.28	7.37	1473.
69	5.90	32.787	69	25.843	217.5	5.89	216.4	1.55	0.54	7.29	1473.
75*	5.85	32.788	75	25.850	216.8	5.84	215.7	1.67	0.63	7.28	1473.
92	5.71	32.792	91	25.870	215.2	5.70	213.9	2.03	0.93	7.22	1472.
100*	5.46	32.805	100	25.909	211.4	5.45	210.2	2.21	1.11	7.21	1472.
115	5.07	32.825	114	25.970	205.8	5.06	204.4	2.52	1.45	7.18	1470.
125*	4.91	33.076	125	26.187	185.3	4.90	183.8	2.72	1.69	6.33	1470.
138	4.73	33.366	137	26.436	161.7	4.72	160.1	2.95	1.99	5.35	1470.
150*	4.74	33.543	149	26.575	148.7	4.73	146.9	3.13	2.27	4.73	1470.
161	4.75	33.694	160	26.693	137.6	4.74	135.7	3.29	2.52	4.20	1471.
175*	4.66	33.750	174	26.748	132.5	4.64	130.5	3.48	2.84	3.85	1471.
184	4.60	33.785	183	26.782	129.4	4.59	127.2	3.60	3.06	3.63	1471.
200*	4.48	33.801	200	26.807	127.1	4.47	124.8	3.80	3.46	3.36	1471.
225*	4.32	33.824	224	26.843	123.8	4.30	121.5	4.12	4.13	2.98	1470.
230	4.29	33.828	228	26.849	123.3	4.27	120.8	4.17	4.27	2.91	1470.
250*	4.21	33.847	249	26.873	121.2	4.19	118.6	4.42	4.88	2.59	1470.
276	4.11	33.870	274	26.902	118.6	4.09	115.9	4.73	5.71	2.20	1470.
300*	4.06	33.904	300	26.934	115.8	4.04	112.8	5.01	6.54	1.95	1471.
371	3.94	33.991	368	27.015	108.6	3.91	105.0	5.81	9.25	1.32	1471.
400*	3.90	34.020	399	27.042	106.3	3.87	102.5	6.12	10.48	1.22	1472.
467	3.82	34.079	463	27.097	101.5	3.79	97.2	6.81	13.54	1.03	1472.
500*	3.75	34.104	498	27.124	99.2	3.72	94.7	7.15	15.19	0.93	1473.
566	3.63	34.149	561	27.172	95.1	3.59	90.1	7.79	18.66	0.75	1473.
600*	3.55	34.176	598	27.201	92.6	3.51	87.3	8.11	20.57	0.72	1474.
700*	3.36	34.247	697	27.276	85.8	3.31	80.1	9.00	26.47	0.65	1475.
731	3.30	34.267	724	27.297	84.0	3.25	78.1	9.26	28.36	0.63	1475.
800*	3.19	34.298	798	27.333	80.9	3.13	74.7	9.83	32.82	0.62	1476.
900*	3.04	34.338	894	27.378	77.0	2.98	70.3	10.62	39.65	0.61	1477.
923	3.01	34.347	914	27.398	76.2	2.95	69.4	10.79	41.27	0.60	1477.
1000*	2.89	34.381	995	27.426	72.8	2.82	65.8	11.37	46.92	0.57	1478.
1112	2.72	34.425	1101	27.476	68.4	2.64	61.0	12.16	55.43	0.53	1479.
1200*	2.61	34.449	1195	27.505	66.0	2.53	58.2	12.75	62.38	0.58	1480.
1392	2.40	34.496	1377	27.560	61.2	2.31	52.9	13.97	78.46	0.67	1482.
1500*	2.31	34.516	1496	27.584	59.2	2.20	50.6	14.62	88.04	0.82	1484.
1851	2.04	34.572	1829	27.650	53.5	1.91	44.2	16.58	121.64	1.24	1488.
2000*	1.96	34.590	1987	27.671	51.8	1.82	42.1	17.37	137.03	1.46	1491.
2310	1.81	34.624	2280	27.710	48.7	1.65	38.3	18.92	171.12	1.87	1495.
2500*	1.74	34.636	2477	27.725	47.4	1.56	36.8	19.83	193.49	2.12	1498.
2776	1.64	34.653	2737	27.746	45.9	1.44	34.7	21.12	223.03	2.46	1502.
3000*	1.60	34.664	2966	27.758	45.2	1.37	33.5	22.14	258.07	2.71	1505.
3259	1.55	34.675	3210	27.770	44.4	1.30	32.1	23.30	295.08	2.97	1510.
3500*	1.53	34.678	3454	27.774	44.6	1.26	31.6	24.37	331.97	3.08	1514.
3767	1.51	34.682	3706	27.779	44.8	1.21	30.9	25.56	376.19	3.20	1519.
3873	1.52	34.686	3809	27.781	44.9	1.21	30.6	26.04	394.65	3.25	1521.
3969	1.51	34.686	3903	27.782	45.0	1.19	30.6	26.47	411.98	3.30	1522.



OXYGEN, ML/L
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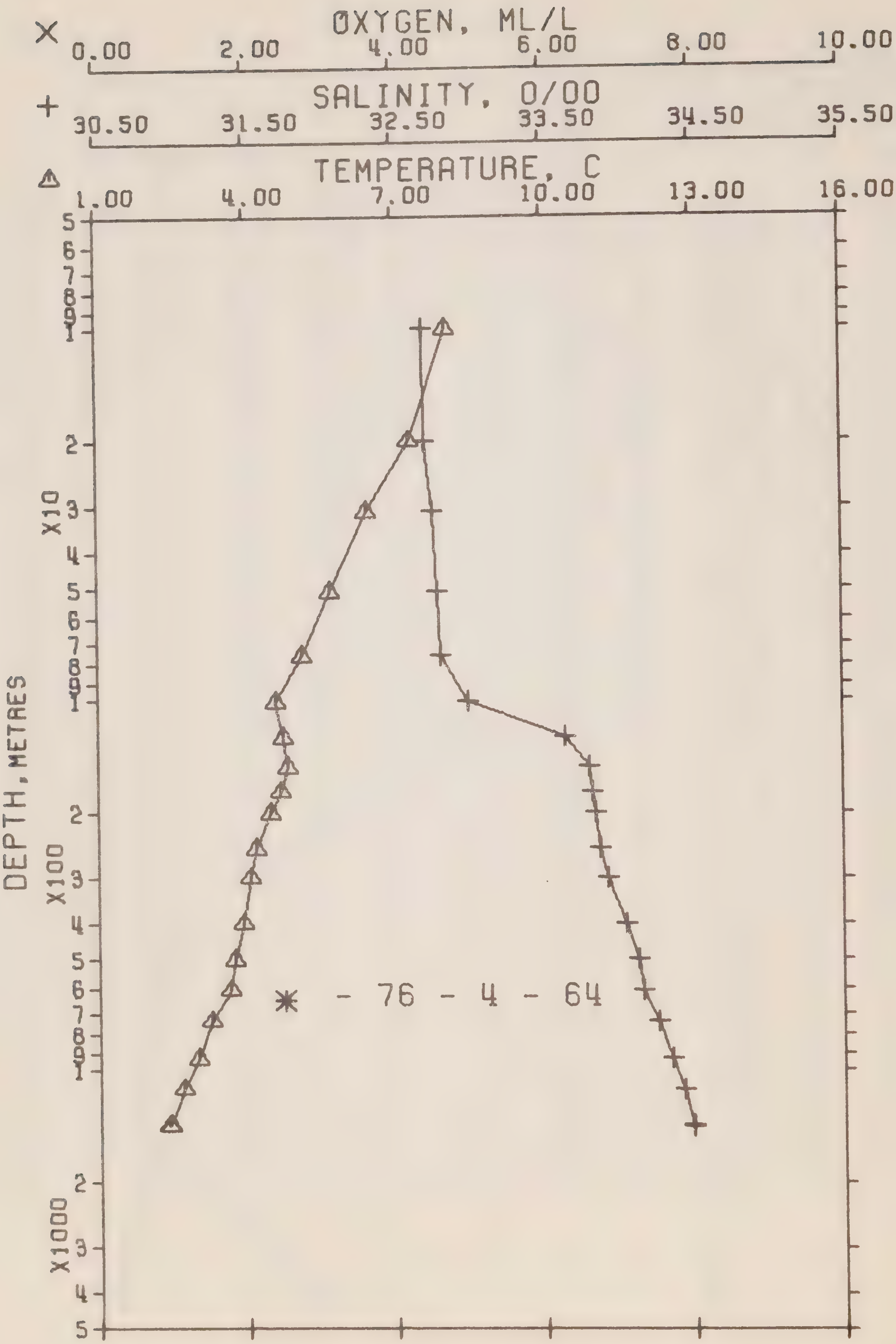
2.00
4.00
6.00
8.00
10.00
SALINITY, 0/00
30.50
31.50
32.50
33.50
34.50
35.50
TEMPERATURE, C
1.00
4.00
7.00
10.00
13.00
16.00
DEPTH, METRES
X10
X100
X1000
* - 76 - 4 - 56

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 56 DATE 15/ 5/76 GMT 17.9
POSITION 50- 0.0 N. 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	7.81	32.754	0	25.564	243.3	7.81	243.1	0.0	0.0	7.08	1479.
10	7.58	32.758	10	25.599	240.1	7.58	239.6	0.24	0.01	7.20	1479.
20	7.29	32.763	20	25.644	236.0	7.29	235.5	0.48	0.05	7.17	1478.
30*	6.19	32.805	30	25.821	219.2	6.19	218.5	0.71	0.11	7.53	1473.
31	6.08	32.809	31	25.838	217.6	6.08	217.0	0.73	0.12	7.57	1473.
50*	5.92	32.810	50	25.859	215.8	5.91	215.0	1.14	0.28	7.31	1473.
51	5.91	32.810	51	25.860	215.7	5.91	214.9	1.17	0.30	7.30	1473.
75*	5.08	32.829	75	25.972	205.2	5.08	204.2	1.67	0.62	7.20	1470.
76	5.04	32.830	76	25.977	204.7	5.03	203.7	1.70	0.64	7.19	1470.
100*	4.69	32.861	100	26.041	198.8	4.68	197.7	2.17	1.07	7.24	1468.
103	4.65	32.864	102	26.047	198.2	4.64	197.0	2.22	1.12	7.24	1468.
125*	4.80	33.474	124	26.513	154.3	4.79	152.8	2.62	1.59	5.10	1470.
128	4.82	33.544	127	26.567	149.3	4.81	147.7	2.67	1.64	4.85	1470.
150*	4.71	33.726	149	26.723	134.7	4.70	132.9	2.98	2.08	4.26	1471.
153	4.70	33.749	152	26.743	132.9	4.69	131.1	3.02	2.14	4.18	1471.
175*	4.56	33.788	174	26.789	128.7	4.55	126.6	3.30	2.62	3.63	1470.
178	4.54	33.793	177	26.795	128.1	4.53	126.1	3.34	2.70	3.55	1470.
200*	4.40	33.812	199	26.825	125.3	4.39	123.2	3.62	3.23	3.24	1470.
203	4.38	33.815	202	26.830	125.0	4.37	122.7	3.66	3.32	3.19	1470.
225*	4.31	33.844	225	26.860	122.3	4.30	119.8	3.93	3.90	2.88	1470.
250*	4.24	33.875	249	26.892	119.5	4.22	116.8	4.23	4.63	2.56	1470.
254	4.23	33.879	252	26.896	119.1	4.21	116.4	4.28	4.75	2.51	1470.
300*	4.12	33.931	298	26.949	114.4	4.10	111.3	4.82	6.27	2.00	1471.
303	4.11	33.934	301	26.952	114.1	4.09	111.1	4.85	6.38	1.97	1471.
400*	3.91	34.029	397	27.049	105.7	3.88	101.8	5.91	10.18	1.29	1472.
403	3.90	34.032	400	27.052	105.4	3.87	101.6	5.95	10.32	1.27	1472.
500*	3.70	34.127	496	27.148	96.9	3.66	92.3	6.93	14.83	0.91	1473.
503	3.69	34.130	499	27.151	96.6	3.65	92.1	6.96	14.98	0.90	1473.
600*	3.51	34.195	595	27.219	90.7	3.47	85.6	7.86	20.06	0.80	1474.
602	3.51	34.196	597	27.221	90.6	3.47	85.4	7.88	20.18	0.80	1474.
700*	3.33	34.245	701	27.277	85.7	3.28	80.1	8.74	25.91	0.78	1474.
800*	3.17	34.288	793	27.327	81.4	3.11	75.3	9.58	32.28	0.76	1475.
805	3.16	34.291	798	27.329	81.3	3.10	75.0	9.62	32.64	0.76	1476.
900*	3.01	34.327	897	27.372	77.6	2.94	70.9	10.37	39.17	0.69	1476.
1000	2.86	34.361	990	27.413	74.0	2.79	67.0	11.13	46.49	0.61	1478.
1195	2.60	34.444	1183	27.502	66.2	2.52	58.6	12.50	61.81	0.57	1480.
1200*	2.59	34.445	1188	27.503	66.0	2.51	58.4	12.53	62.19	0.58	1480.
1493	2.31	34.510	1477	27.579	59.6	2.21	51.1	14.36	87.34	0.78	1484.
1500*	2.30	34.511	1485	27.580	59.4	2.20	51.0	14.40	87.94	0.79	1484.
1997	1.94	34.594	1973	27.676	51.2	1.80	41.7	17.07	135.45	1.37	1490.
2000*	1.94	34.594	1976	27.676	51.2	1.80	41.7	17.08	135.72	1.37	1490.
2500*	1.75	34.630	2467	27.719	48.1	1.57	37.3	19.60	193.39	2.00	1498.
2509	1.75	34.631	2475	27.720	48.0	1.57	37.2	19.64	194.44	2.01	1498.
3000*	1.60	34.662	2958	27.756	45.3	1.37	33.5	21.92	258.41	2.57	1506.
3021	1.59	34.663	2977	27.758	45.2	1.37	33.5	22.01	261.33	2.59	1506.
3500*	1.53	34.667	3447	27.765	45.5	1.26	32.5	24.17	333.10	2.74	1514.
3531	1.53	34.667	3476	27.765	45.5	1.26	32.4	24.31	339.23		1515.
4000*	1.51	34.669	3935	27.768	46.4	1.19	31.8	26.47	421.09		1523.
4035	1.51	34.669	3967	27.768	46.4	1.18	31.7	26.63	427.70	2.88	1523.
4100*	1.52	34.670	4031	27.769	46.6	1.19	31.6	26.94	440.26	3.20	1524.
4134	1.52	34.671	4064	27.769	46.7	1.18	31.6	27.10	446.99	3.36	1525.
4200*	1.53	34.671	4128	27.769	47.0	1.18	31.6	27.40	460.05	3.38	1526.
4223	1.53	34.671	4150	27.768	47.0	1.18	31.6	27.51	464.62		1527.
4233	1.53	34.672	4160	27.769	47.1	1.18	31.6	27.56	466.70		1527.



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+ SALINITY, 0/00
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31.50
32.50
33.50
34.50
35.50
△ TEMPERATURE, C
1.00
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13.00
16.00
DEPTH, METRES
X10
X100
X1000
* - 76 - 4 - 64

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 64 DATE 20/ 5/76 GMT 22.7
POSITION 50- 0.0 N, 145- 0.0 W STATION P
HYDROGAPHIC CAST DATA

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	THETA	SVA (THETA)	DELTA D	POT. EN	OXY	SOUND
0	8.14	32.712	0	25.483	251.0	8.14	250.8	0.0	0.0		1480.
10	8.07	32.710	10	25.492	250.3	8.07	250.0	0.25	0.01		1480.
20	7.32	32.725	20	25.610	239.2	7.32	238.6	0.50	0.05		1478.
30*	6.53	32.764	30	25.746	226.4	6.53	225.7	0.73	0.11		1475.
31	6.45	32.768	31	25.759	225.1	6.45	224.5	0.76	0.12		1474.
50*	5.76	32.800	50	25.871	214.7	5.75	213.9	1.17	0.29		1472.
51	5.72	32.802	51	25.877	214.1	5.72	213.3	1.20	0.30		1472.
75*	5.18	32.819	75	25.953	207.0	5.17	206.0	1.69	0.62		1470.
76	5.15	32.820	76	25.957	206.6	5.14	205.7	1.72	0.65		1470.
100*	4.64	32.989	100	26.147	188.8	4.63	187.6	2.19	1.07		1468.
102	4.61	32.999	101	26.158	187.7	4.60	186.5	2.22	1.10		1468.
125*	4.73	33.606	124	26.626	143.7	4.72	142.1	2.62	1.55		1470.
127	4.74	33.649	126	26.659	140.6	4.73	138.9	2.64	1.59		1470.
150*	4.83	33.797	149	26.766	130.7	4.82	128.8	2.95	2.02		1471.
152	4.84	33.809	151	26.774	129.8	4.83	128.0	2.98	2.06		1471.
175*	4.69	33.831	174	26.808	126.8	4.68	124.8	3.27	2.55		1471.
177	4.68	33.833	176	26.811	126.6	4.67	124.4	3.30	2.60		1471.
200*	4.50	33.845	199	26.840	123.9	4.48	121.7	3.58	3.15		1471.
202	4.48	33.846	201	26.843	123.7	4.46	121.4	3.61	3.21		1471.
225*	4.33	33.864	225	26.873	121.0	4.32	118.6	3.89	3.81		1470.
250*	4.19	33.881	248	26.902	118.4	4.17	115.8	4.19	4.53		1470.
253	4.17	33.883	251	26.906	118.1	4.15	115.5	4.22	4.62		1470.
300*	4.06	33.930	298	26.955	113.8	4.03	110.8	4.77	5.16		1471.
302	4.05	33.932	300	26.957	113.6	4.03	110.6	4.79	5.24		1471.
400*	3.91	34.044	397	27.060	104.6	3.89	100.8	5.86	10.05		1472.
403	3.91	34.047	400	27.063	104.3	3.88	100.5	5.89	10.19		1472.
500*	3.74	34.131	496	27.147	97.0	3.70	92.5	6.87	14.67		1473.
505	3.73	34.135	501	27.151	96.7	3.69	92.1	6.92	14.93		1473.
600*	3.64	34.156	596	27.176	94.9	3.60	89.6	7.82	20.01		1474.
611	3.63	34.158	606	27.179	94.8	3.59	89.4	7.93	20.68		1474.
700*	3.37	34.230	696	27.261	87.4	3.32	81.6	8.74	26.11		1475.
743	3.26	34.261	736	27.296	84.1	3.21	78.2	9.11	28.80		1475.
800*	3.17	34.290	797	27.328	81.3	3.11	75.2	9.58	32.52		1475.
900*	3.02	34.336	895	27.378	77.0	2.96	70.4	10.37	39.37		1477.
936	2.97	34.351	927	27.395	75.6	2.91	68.8	10.64	41.94		1477.
1000*	2.87	34.377	994	27.425	72.9	2.80	65.9	11.12	46.63		1478.
1132	2.68	34.427	1121	27.481	67.9	2.60	60.5	12.05	56.73		1479.
1200*	2.61	34.443	1194	27.500	66.3	2.53	58.6	12.50	62.12		1480.
1418	2.40	34.490	1403	27.555	61.7	2.30	53.3	13.89	80.64		1483.
1428	2.39	34.490	1413	27.556	61.7	2.29	53.2	13.95	81.55		1483.

Results of STP Observations

(P-76-4)

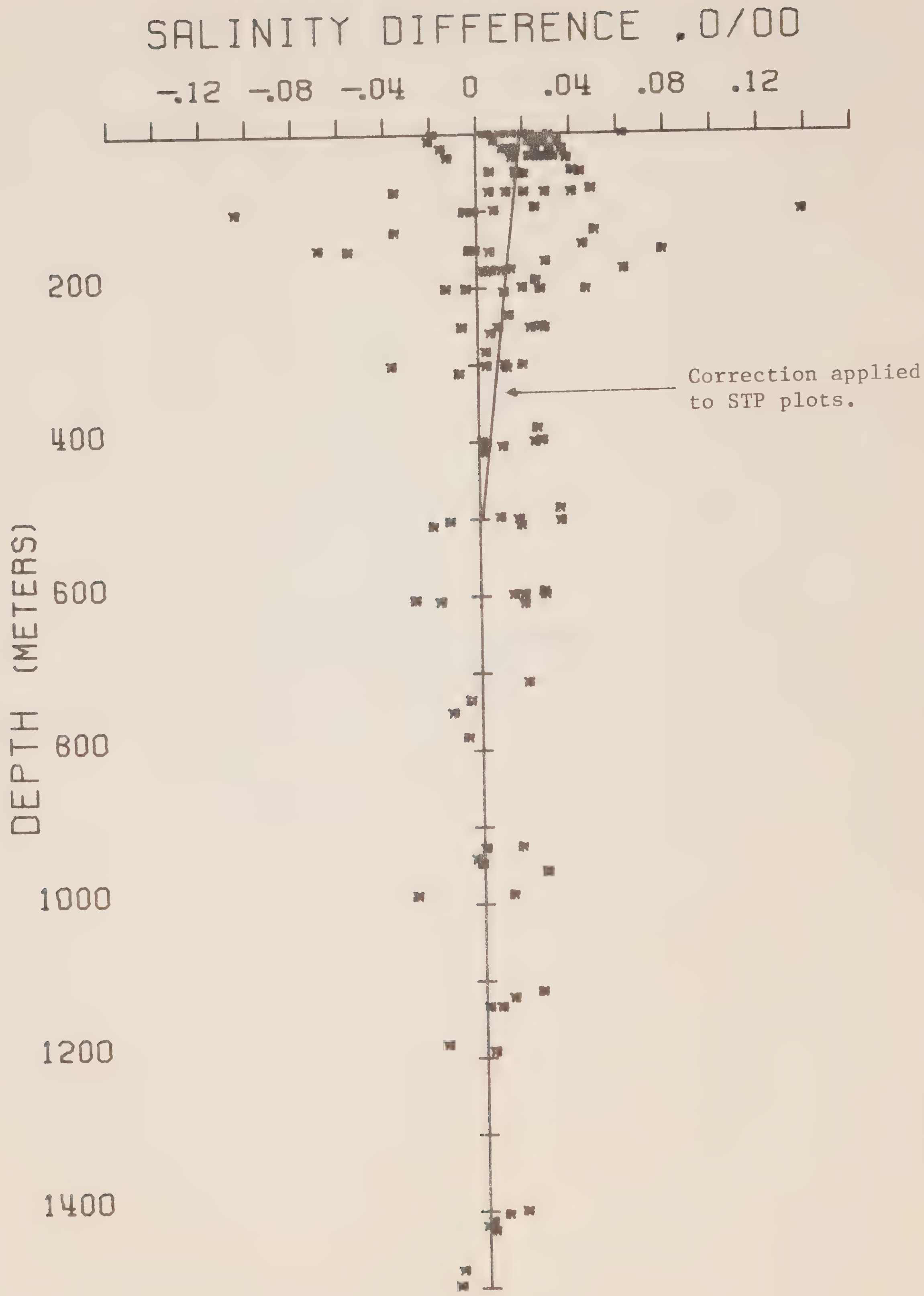


Fig. 5 Salinity difference between hydro data and STP. P-76-4

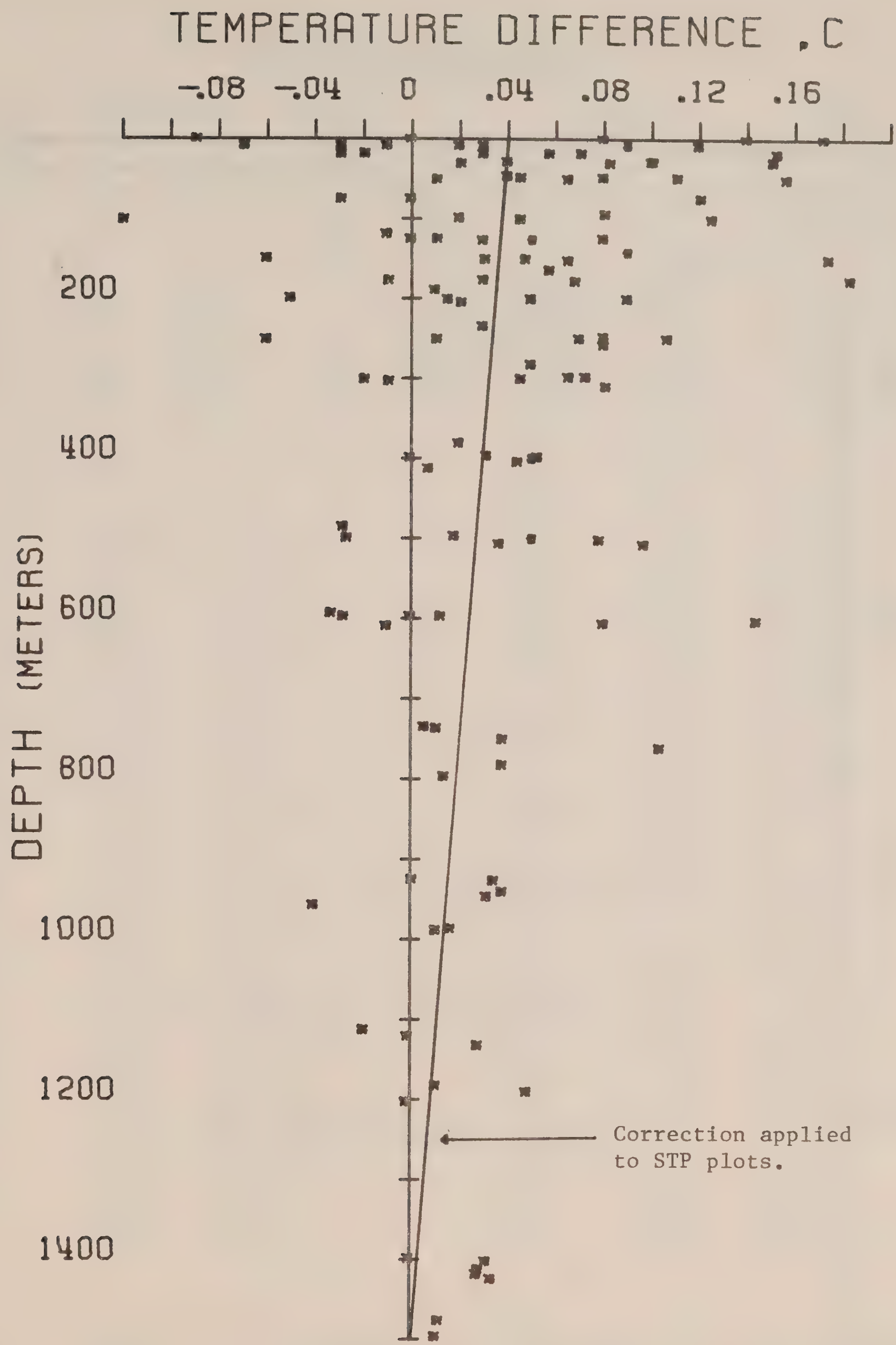
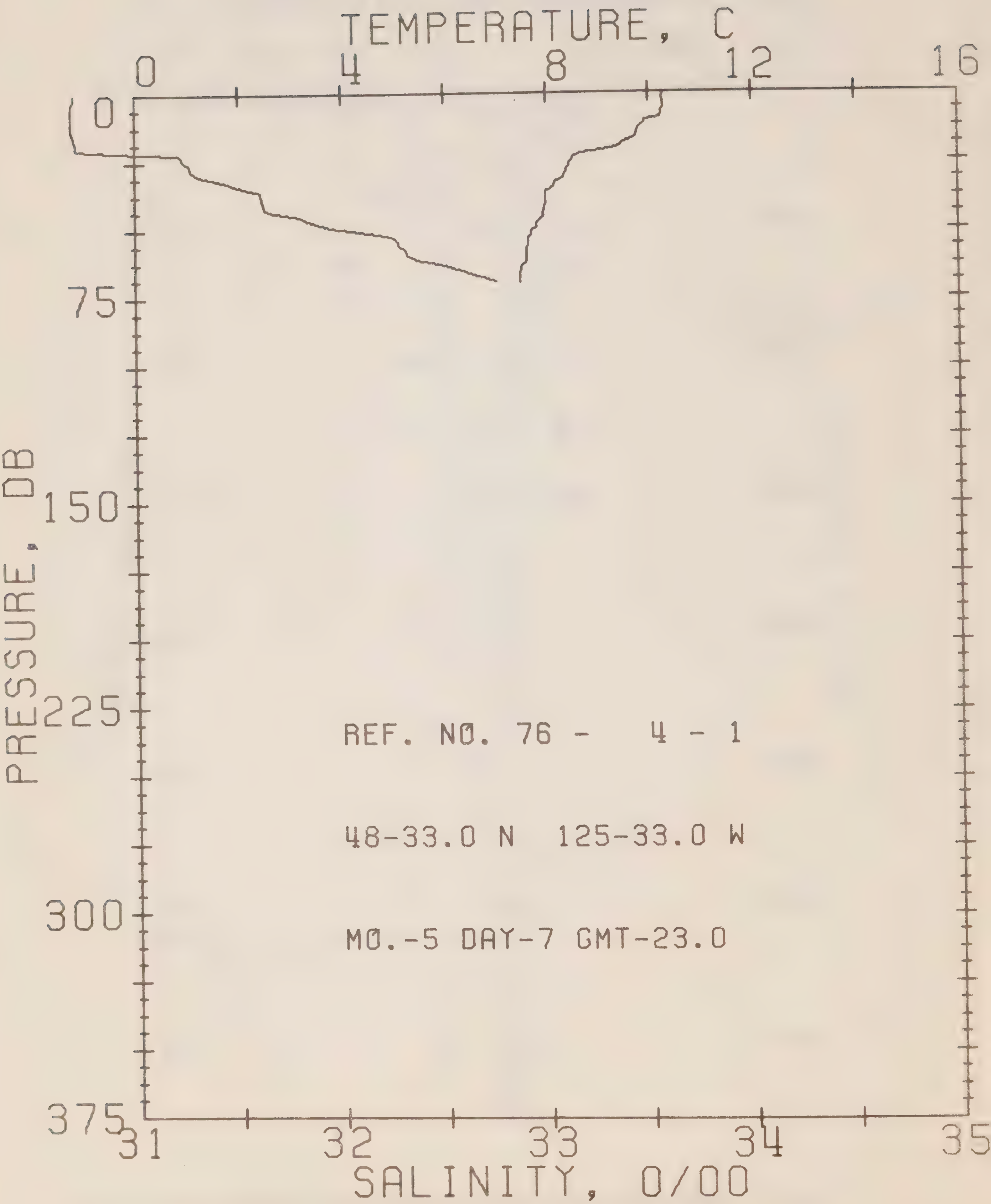


Fig. 6 Temperature difference between hydro data and STP. P-76-4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12
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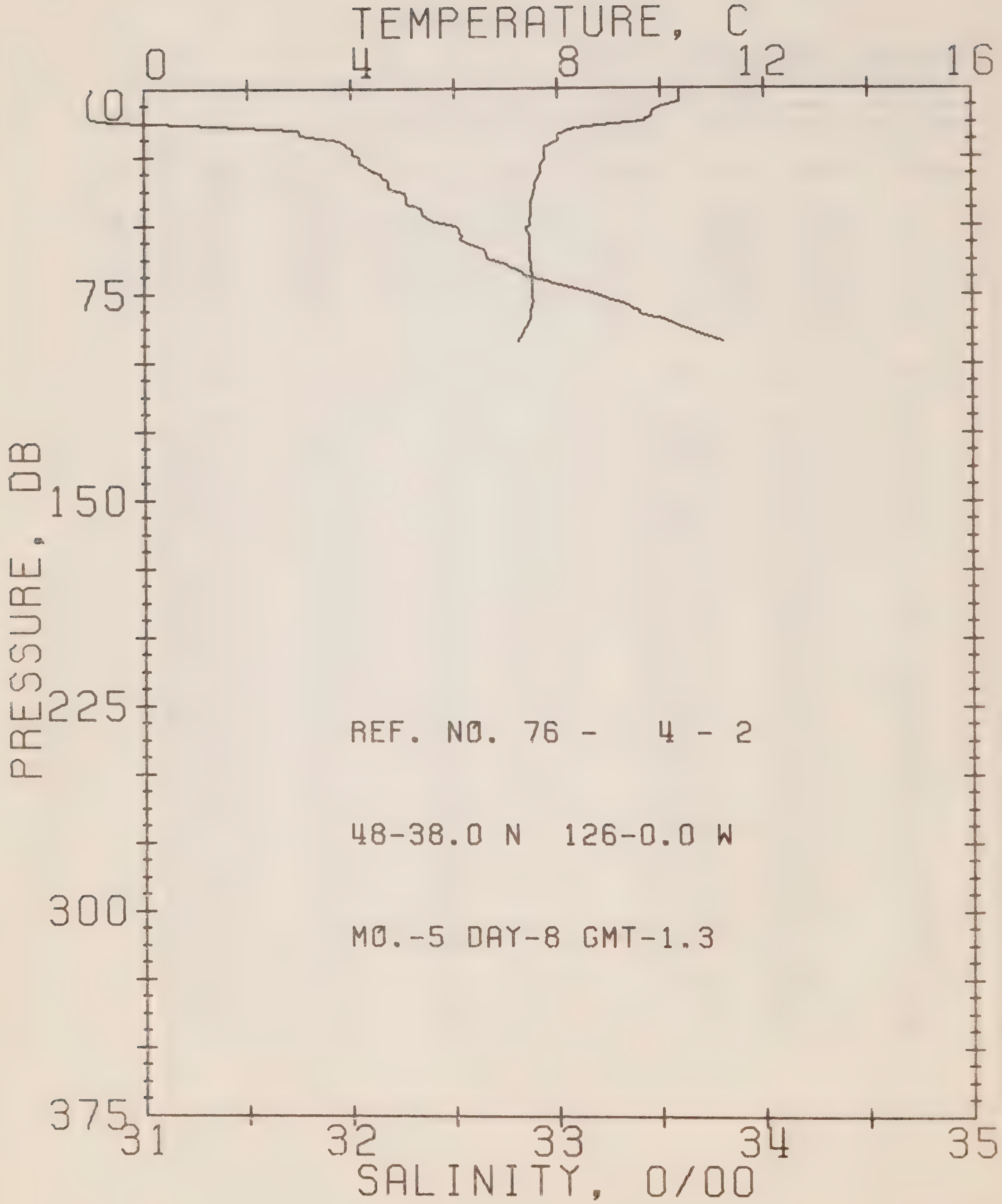
75
150
225
300
375
PRESSURE, DB
REF. NO. 76 - 4 - 1
48-33.0 N 125-33.0 W
MO.-5 DAY-7 GMT-23.0
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 1 DATE 7/ 5/76
POSITION 48-33.0N, 125-33.0W GMT 23.0
RESULTS OF STP CAST 54 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.25	30.70	0	23.58	431.6	0.0	0.0	1486.
10	9.94	30.69	10	23.63	427.9	0.43	0.02	1485.
20	9.38	30.71	20	23.73	418.1	0.86	0.09	1483.
30	8.36	31.31	30	24.35	358.9	1.23	0.18	1480.
50	7.73	32.05	50	25.02	295.4	1.89	0.45	1479.

DEPTH	TEMP	SAL	DEPTH	TEMP	SAL
0.	10.25	30.70	31.	8.34	31.37
1.	10.29	30.70	32.	8.22	31.43
2.	10.27	30.70	34.	8.16	31.50
4.	10.28	30.69	35.	8.07	31.56
6.	10.28	30.69	36.	8.01	31.61
7.	10.24	30.69	37.	7.99	31.61
8.	10.26	30.69	41.	7.99	31.62
9.	10.23	30.69	42.	7.98	31.63
10.	9.94	30.69	43.	7.98	31.65
11.	9.92	30.69	44.	7.95	31.73
12.	9.88	30.69	45.	7.94	31.80
13.	9.81	30.69	46.	7.90	31.82
16.	9.77	30.70	47.	7.83	31.86
17.	9.68	30.70	49.	7.82	31.95
18.	9.52	30.71	50.	7.73	32.05
19.	9.46	30.71	52.	7.70	32.22
20.	9.38	30.71	53.	7.66	32.26
21.	9.08	30.89	56.	7.65	32.29
22.	8.66	31.21	57.	7.64	32.31
23.	8.56	31.22	59.	7.63	32.32
24.	8.53	31.23	61.	7.63	32.37
25.	8.50	31.24	62.	7.60	32.44
26.	8.46	31.26	63.	7.55	32.51
27.	8.45	31.26	64.	7.53	32.55
28.	8.40	31.27	65.	7.51	32.60
29.	8.39	31.29	66.	7.49	32.63
30.	8.36	31.31	69.	7.49	32.75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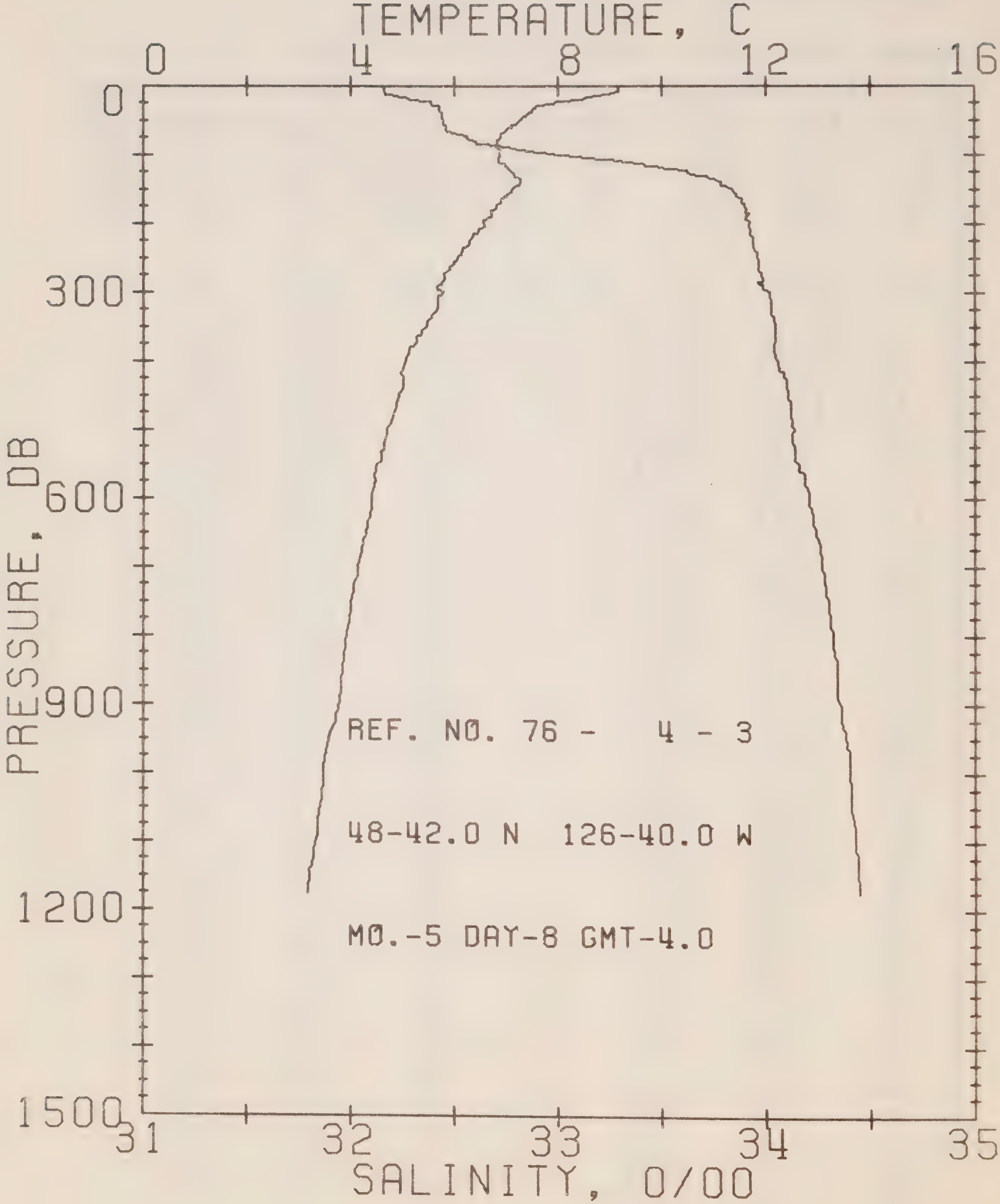
8
12
16
0
75
150
225
300
375
PRESSURE, DB
REF. NO. 76 - 4 - 2
48-38.0 N 126-0.0 W
MO.-5 DAY-8 GMT-1.3
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 2 DATE 8/ 5/76
POSITION 48-38.0N, 126- 0.0W GMT 1.3
RESULTS OF STP CAST 79 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	10.37	30.74	0	23.60	430.5	0.0	0.0	1486.
10	9.84	30.73	10	23.67	423.4	0.43	0.02	1485.
20	7.90	31.96	20	24.93	303.6	0.78	0.07	1479.
30	7.68	32.10	30	25.07	290.7	1.08	0.15	1478.
50	7.46	32.51	50	25.42	257.5	1.63	0.37	1478.
75	7.53	33.19	75	25.95	208.2	2.23	0.75	1480.

DEPTH	TEMP	SAL
0.	10.37	30.74
1.	10.37	30.75
3.	10.38	30.73
4.	10.38	30.73
5.	10.36	30.73
6.	10.13	30.73
7.	9.97	30.73
8.	9.88	30.73
10.	9.84	30.73
11.	9.74	30.74
12.	9.71	30.84
13.	9.12	31.21
14.	8.57	31.47
15.	8.22	31.74
17.	8.03	31.75
19.	8.02	31.95
21.	7.78	31.98
22.	7.75	32.00
23.	7.75	32.01
24.	7.75	32.01
25.	7.75	32.04
26.	7.75	32.04
27.	7.72	32.04
29.	7.69	32.08
30.	7.68	32.10
31.	7.67	32.14
32.	7.66	32.15
34.	7.60	32.18
35.	7.58	32.18
36.	7.58	32.18
37.	7.58	32.20
38.	7.55	32.26
39.	7.54	32.26
40.	7.51	32.27
42.	7.50	32.27
43.	7.50	32.32
44.	7.49	32.34
45.	7.48	32.34
46.	7.48	32.35
47.	7.48	32.37
48.	7.47	32.39
49.	7.46	32.44
50.	7.46	32.51
51.	7.40	32.52
53.	7.43	32.53
54.	7.46	32.54
55.	7.46	32.53
56.	7.46	32.56
57.	7.46	32.59
58.	7.46	32.63
59.	7.46	32.65
62.	7.47	32.66
63.	7.47	32.71
64.	7.48	32.75
65.	7.48	32.77
66.	7.48	32.81
67.	7.50	32.83
68.	7.52	32.84
69.	7.51	32.88
70.	7.51	32.95
71.	7.51	32.98
72.	7.51	33.04
74.	7.53	33.15
75.	7.53	33.19
76.	7.53	33.23
77.	7.53	33.26
78.	7.54	33.32
79.	7.53	33.35
80.	7.51	33.36
81.	7.49	33.40
82.	7.49	33.40
83.	7.48	33.45
84.	7.48	33.52
85.	7.47	33.55
87.	7.42	33.61
88.	7.36	33.65
89.	7.35	33.68
91.	7.28	33.76
92.	7.26	33.80


TEMPERATURE, C
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16
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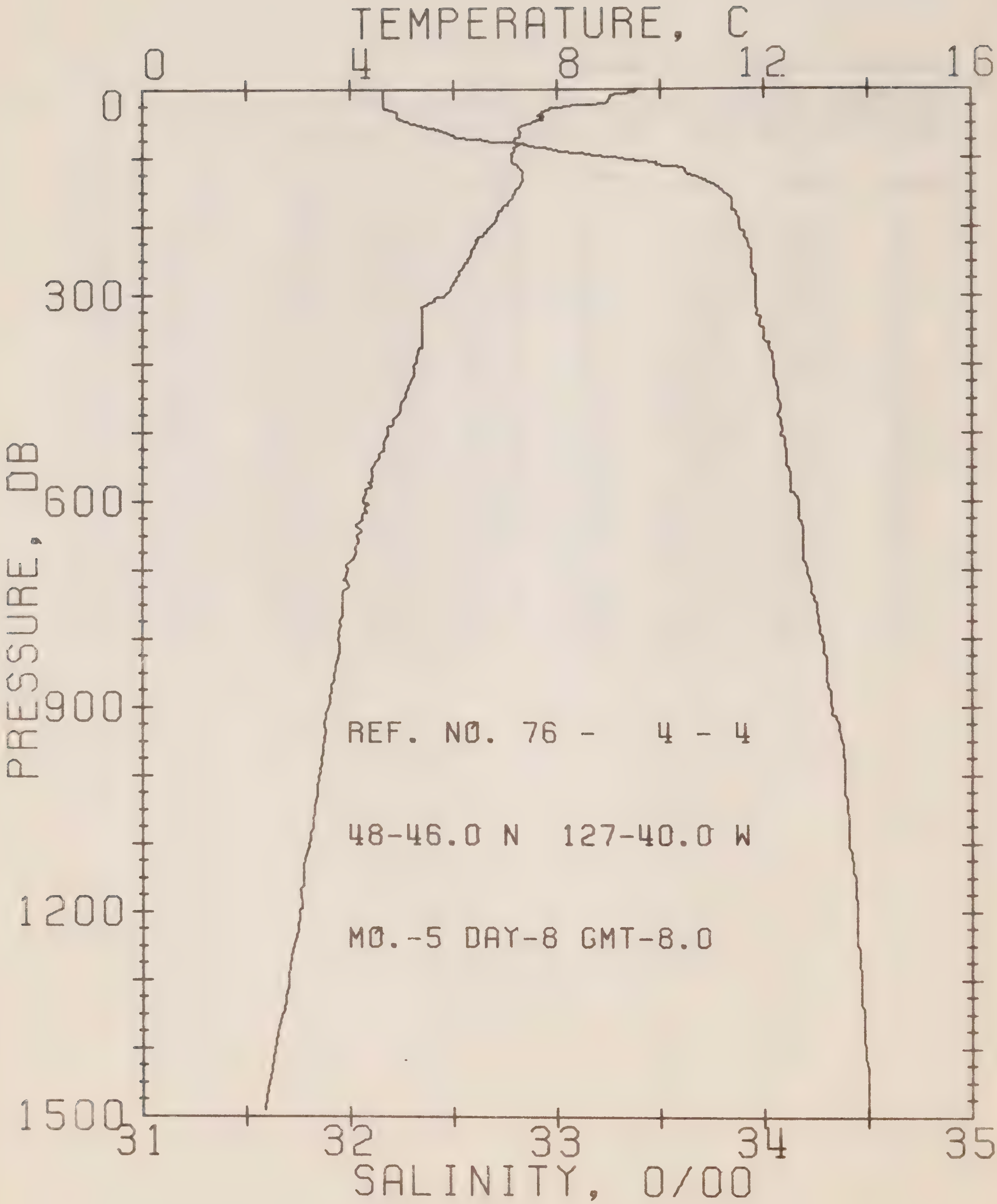
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 3
48-42.0 N 126-40.0 W
MO.-5 DAY-8 GMT-4.0
31
32
33
34
35
SALINITY, O/OO

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 3 DATE 8/ 5/76
POSITION 48-42.0N, 126-40.0W GMT 4.0
RESULTS OF STP CAST 400 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.19	32.15	0	24.88	307.8	0.0	0.0	1484.
10	9.09	32.17	10	24.92	305.2	0.31	0.02	1484.
20	8.46	32.29	20	25.11	287.2	0.60	0.06	1481.
30	7.60	32.42	30	25.34	265.4	0.88	0.13	1479.
50	7.28	32.44	50	25.40	259.9	1.40	0.34	1478.
75	6.86	32.56	75	25.54	246.3	2.04	0.75	1477.
100	6.88	33.02	99	25.90	212.6	2.62	1.27	1478.
125	7.14	33.63	124	26.35	170.9	3.09	1.80	1480.
150	7.13	33.84	149	26.51	155.5	3.50	2.37	1480.
175	6.81	33.90	174	26.60	147.2	3.88	3.00	1480.
200	6.59	33.92	199	26.65	143.1	4.24	3.69	1479.
225	6.30	33.94	223	26.70	138.3	4.59	4.45	1479.
250	6.06	33.96	248	26.75	134.1	4.93	5.28	1478.
300	5.78	34.02	298	26.83	126.8	5.58	7.10	1478.
400	5.06	34.06	397	26.95	116.4	6.80	11.43	1477.
500	4.69	34.14	496	27.05	107.0	7.91	16.54	1477.
600	4.39	34.21	595	27.14	99.2	8.95	22.36	1477.
800	3.92	34.32	793	27.28	87.4	10.81	35.59	1479.
1000	3.46	34.40	991	27.39	77.9	12.47	50.79	1480.


TEMPERATURE, C
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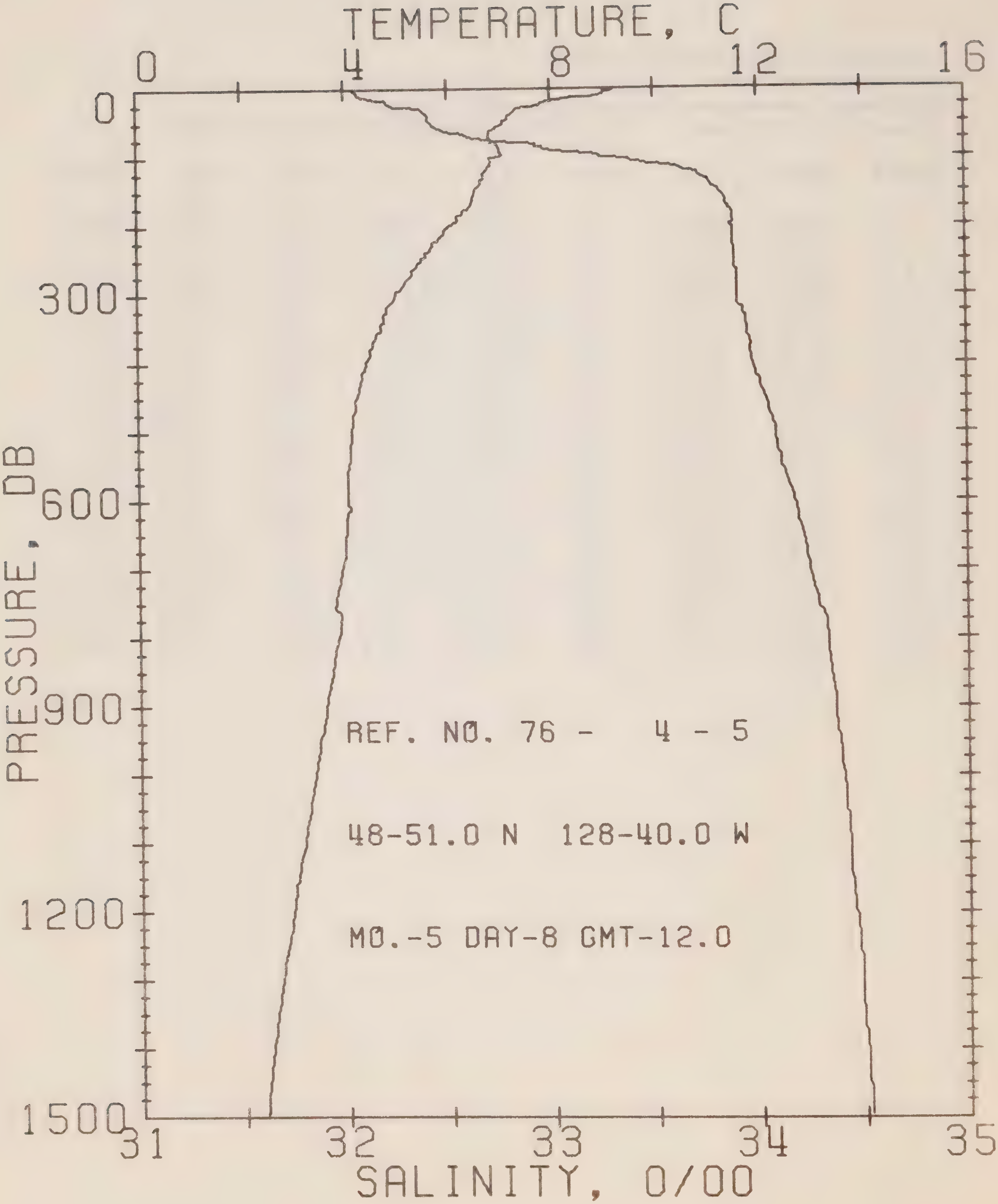
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 4
48-46.0 N 127-40.0 W
MO.-5 DAY-8 GMT-8.0
31
32
33
34
35
SALINITY, O/OO

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 4 DATE 8/ 5/76
POSITION 48-46.0N, 127-40.0W GMT 8.0
RESULTS OF STP CAST 532 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.54	32.16	0	24.84	312.3	0.0	0.0	1485.
10	9.03	32.16	10	24.92	305.1	0.31	0.02	1483.
20	8.96	32.16	20	24.93	304.1	0.61	0.06	1483.
30	7.84	32.19	30	25.12	286.2	0.91	0.14	1479.
50	7.49	32.30	50	25.25	273.5	1.47	0.37	1478.
75	7.15	32.69	75	25.61	240.3	2.12	0.78	1478.
100	7.11	33.32	99	26.11	193.3	2.66	1.26	1479.
125	7.33	33.65	124	26.33	172.0	3.11	1.77	1481.
150	7.18	33.81	149	26.48	158.4	3.52	2.35	1481.
175	6.90	33.85	174	26.55	152.1	3.91	2.99	1480.
200	6.70	33.88	199	26.60	147.6	4.28	3.70	1480.
225	6.40	33.93	223	26.68	140.3	4.64	4.48	1479.
250	6.26	33.94	248	26.71	138.1	4.99	5.32	1479.
300	5.82	33.96	298	26.78	131.8	5.66	7.21	1478.
400	5.23	34.05	397	26.92	119.0	6.90	11.64	1477.
500	4.71	34.08	496	27.01	111.4	8.06	16.93	1477.
600	4.25	34.17	595	27.12	100.6	9.13	22.90	1477.
800	3.77	34.28	793	27.26	88.7	11.03	36.44	1478.
1000	3.40	34.39	991	27.39	77.8	12.69	51.67	1480.
1200	3.00	34.45	1188	27.47	70.2	14.18	68.30	1482.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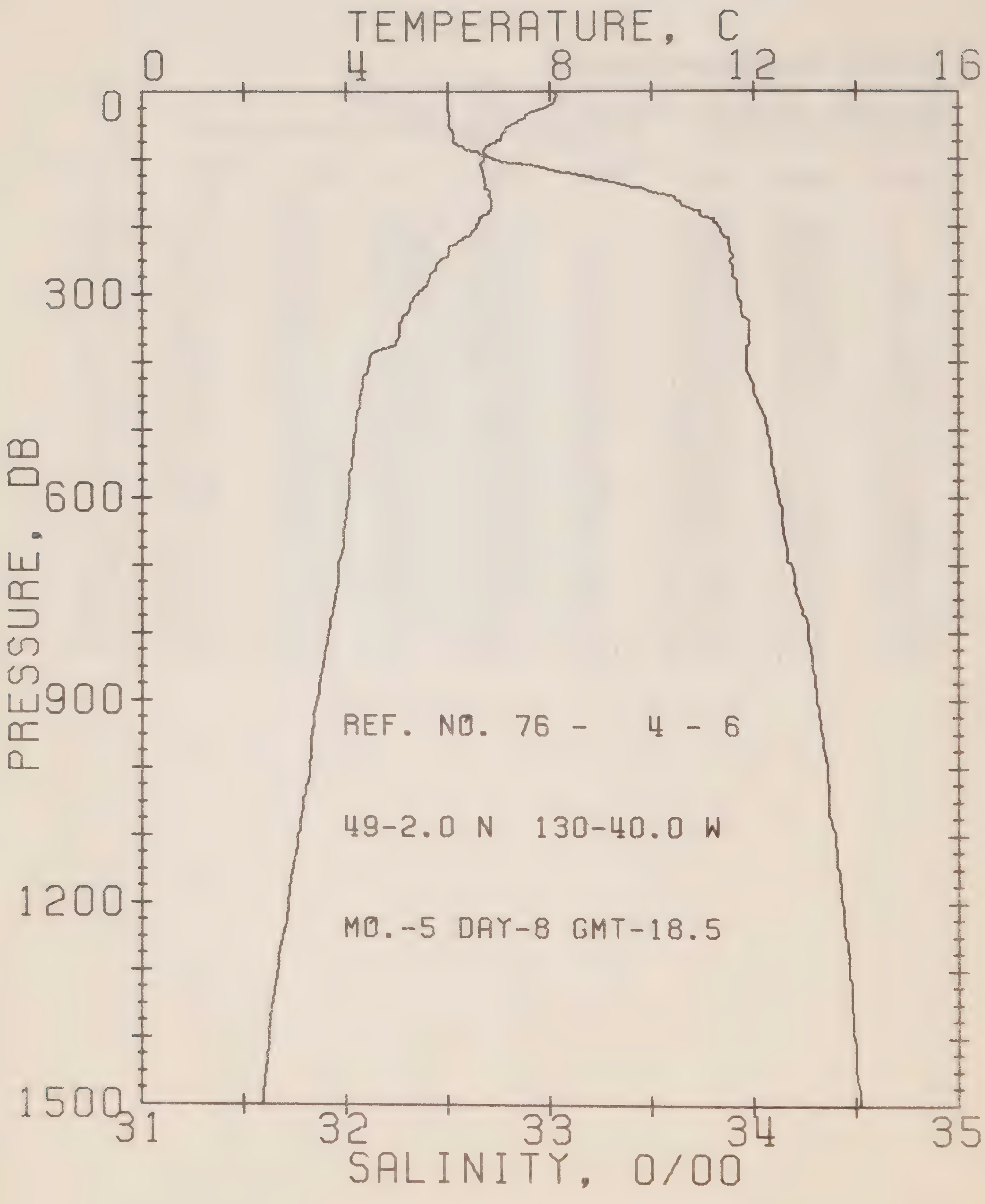
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 5
48-51.0 N 128-40.0 W
MO.-5 DAY-8 GMT-12.0
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 5 DATE 8/ 5/76
POSITION 48-51.0N, 128-40.0W GMT 12.0
RESULTS OF STP CAST 349 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	9.23	32.05	0	24.80	315.8	0.0	0.0	1484.
10	8.95	32.08	10	24.87	309.8	0.31	0.02	1483.
20	7.92	32.21	20	25.12	285.7	0.61	0.06	1479.
30	7.35	32.37	30	25.33	266.1	0.89	0.13	1477.
50	7.07	32.42	50	25.40	259.3	1.41	0.34	1477.
75	6.86	32.71	75	25.66	235.1	2.03	0.74	1477.
100	6.96	33.24	99	26.06	197.2	2.57	1.22	1478.
125	6.69	33.71	124	26.47	158.7	3.00	1.71	1478.
150	6.52	33.82	149	26.58	149.3	3.39	2.25	1478.
175	6.38	33.86	174	26.63	144.6	3.76	2.86	1478.
200	6.03	33.87	199	26.68	139.8	4.11	3.53	1477.
225	5.71	33.88	223	26.73	135.4	4.45	4.28	1476.
250	5.47	33.89	248	26.77	132.1	4.79	5.09	1476.
300	4.98	33.90	298	26.83	126.1	5.43	6.90	1474.
400	4.40	33.97	397	26.95	115.2	6.63	11.17	1474.
500	4.11	34.08	496	27.07	104.8	7.73	16.17	1474.
600	4.02	34.17	595	27.15	98.1	8.74	21.88	1476.
800	3.82	34.33	793	27.30	85.7	10.58	34.95	1478.
1000	3.36	34.40	990	27.40	76.7	12.21	49.83	1480.
1200	2.91	34.45	1188	27.48	69.1	13.66	66.13	1481.


TEMPERATURE, C
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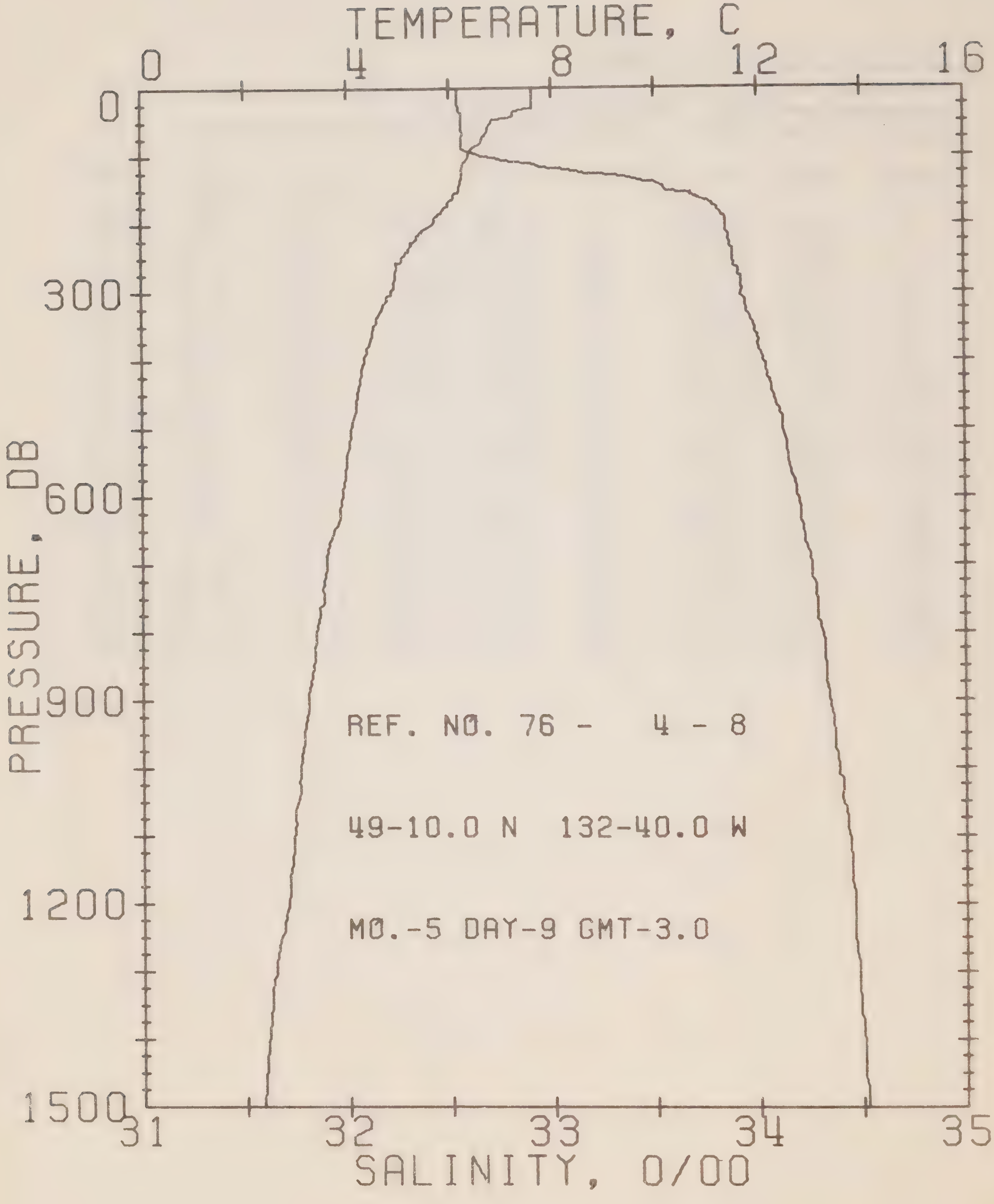
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 6
49-2.0 N 130-40.0 W
MO.-5 DAY-8 GMT-18.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 6 DATE 8/ 5/76
POSITION 49- 2.0N, 130-40.0W GMT 18.5
RESULTS OF STP CAST 357 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.08	32.50	0	25.33	265.8	0.0	0.0	1480.
10	8.11	32.50	10	25.32	266.5	0.27	0.01	1480.
20	8.04	32.50	20	25.33	265.7	0.53	0.05	1480.
30	7.71	32.50	30	25.38	261.3	0.80	0.12	1479.
50	7.29	32.51	50	25.45	255.2	1.31	0.33	1478.
75	6.94	32.53	75	25.51	249.5	1.94	0.73	1477.
100	6.73	32.72	99	25.69	233.1	2.54	1.27	1477.
125	6.71	33.20	124	26.07	197.3	3.08	1.88	1478.
150	6.83	33.52	149	26.30	175.4	3.55	2.54	1479.
175	6.83	33.71	174	26.45	161.5	3.97	3.23	1480.
200	6.55	33.83	199	26.58	149.3	4.35	3.97	1479.
225	6.17	33.88	223	26.67	141.1	4.72	4.76	1478.
250	5.85	33.89	248	26.72	136.6	5.06	5.59	1477.
300	5.42	33.92	298	26.80	129.8	5.73	7.46	1476.
400	4.45	33.97	397	26.95	115.9	6.95	11.81	1474.
500	4.19	34.07	496	27.05	106.6	8.07	16.91	1475.
600	4.03	34.12	595	27.11	101.7	9.11	22.74	1476.
800	3.65	34.27	793	27.27	88.1	11.02	36.35	1477.
1000	3.28	34.36	991	27.37	78.7	12.68	51.59	1479.
1200	2.85	34.44	1188	27.47	69.6	14.17	68.23	1481.


TEMPERATURE, C
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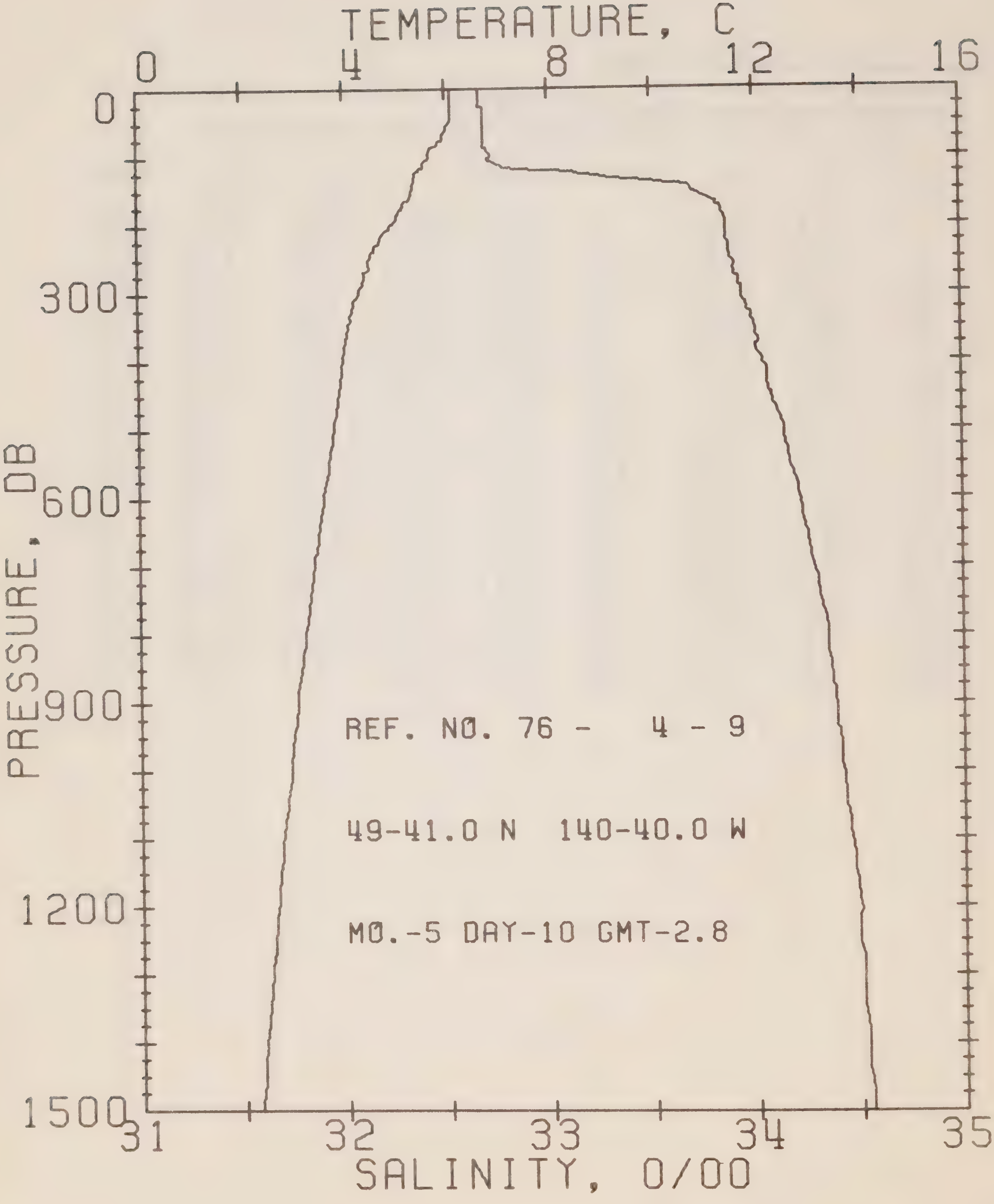
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 8
49-10.0 N 132-40.0 W
MO.-5 DAY-9 GMT-3.0
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 8 DATE 9/ 5/76
POSITION 49-10.0N, 132-40.0W GMT 3.0
RESULTS OF STP CAST 322 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.63	32.54	0	25.42	256.6	0.0	0.0	1478.
10	7.63	32.54	10	25.42	257.0	0.26	0.01	1478.
20	7.63	32.54	20	25.42	257.1	0.51	0.05	1479.
30	7.62	32.55	30	25.43	256.4	0.77	0.12	1479.
50	6.81	32.56	50	25.55	245.4	1.27	0.32	1476.
75	6.63	32.56	75	25.57	243.5	1.88	0.71	1476.
100	6.36	32.66	99	25.69	232.9	2.48	1.25	1475.
125	6.24	33.17	124	26.10	193.6	3.02	1.86	1476.
150	6.18	33.55	149	26.41	164.6	3.45	2.46	1476.
175	5.93	33.80	174	26.64	143.7	3.83	3.09	1476.
200	5.67	33.85	199	26.71	136.8	4.18	3.76	1475.
225	5.29	33.86	223	26.76	131.9	4.51	4.48	1474.
250	5.07	33.88	248	26.80	128.2	4.84	5.27	1474.
300	4.86	33.92	298	26.86	123.0	5.46	7.01	1474.
400	4.32	34.03	397	27.01	110.0	6.62	11.14	1473.
500	4.06	34.12	496	27.10	101.4	7.68	15.97	1474.
600	3.89	34.19	595	27.18	94.8	8.66	21.46	1475.
800	3.37	34.31	793	27.33	82.0	10.42	33.99	1476.
1000	3.05	34.39	990	27.42	74.0	11.98	48.32	1478.
1200	2.80	34.46	1188	27.50	67.1	13.38	64.01	1481.
1500	2.31	34.52	1484	27.59	58.9	15.26	89.72	1484.


TEMPERATURE, C
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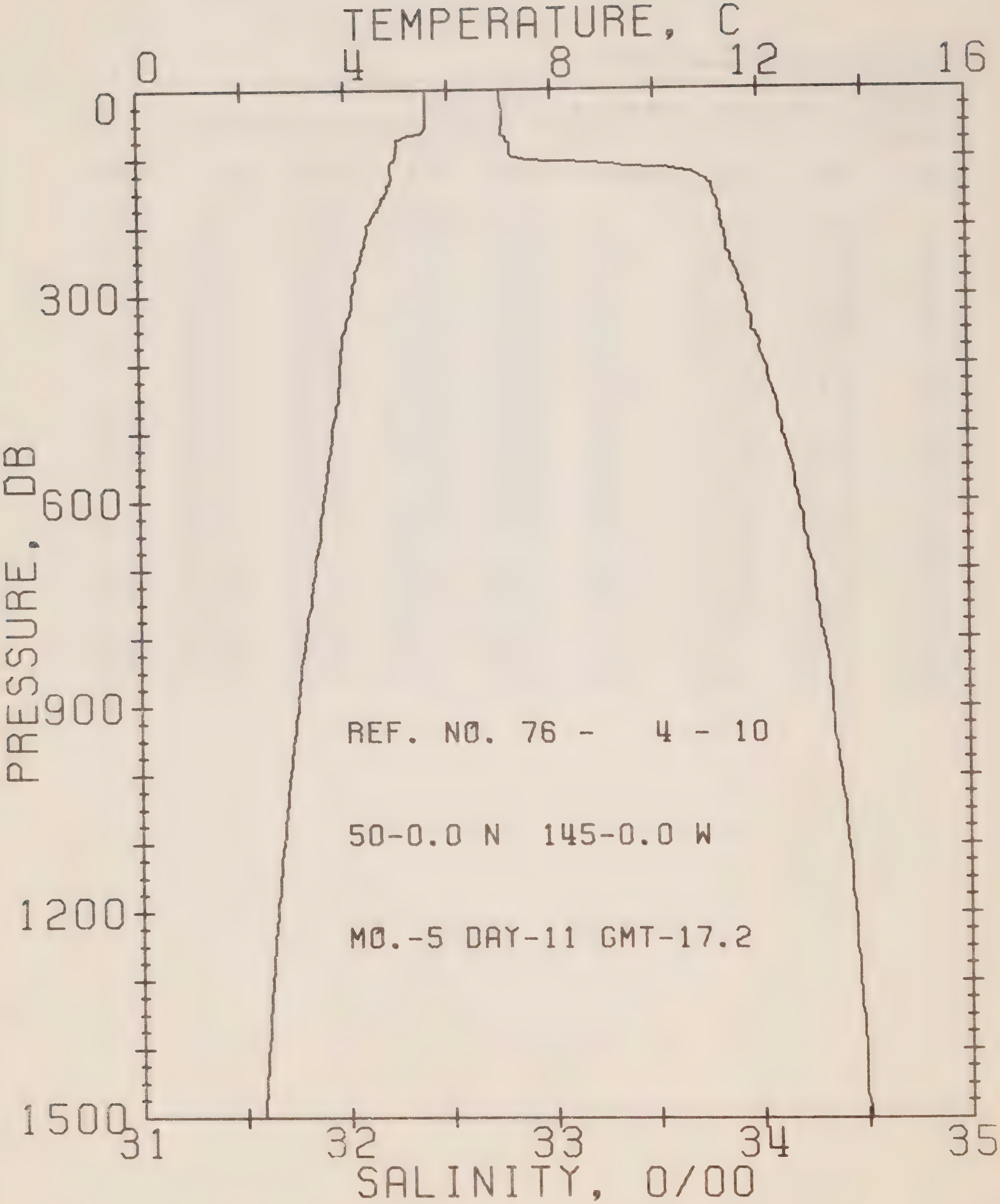
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 9
49-41.0 N 140-40.0 W
MO.-5 DAY-10 GMT-2.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 9 DATE 10/ 5/76
POSITION 49-41.0N, 140-40.0W GMT 2.8
RESULTS OF STP CAST 304 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.11	32.67	0	25.72	227.8	0.0	0.0	1472.
10	6.11	32.67	10	25.72	228.1	0.23	0.01	1473.
20	6.11	32.67	20	25.72	228.2	0.46	0.05	1473.
30	6.11	32.69	30	25.74	227.0	0.68	0.10	1473.
50	6.07	32.69	50	25.75	226.6	1.14	0.29	1473.
75	5.93	32.69	75	25.76	225.3	1.70	0.65	1473.
100	5.67	32.72	99	25.82	220.2	2.26	1.14	1472.
125	5.41	33.17	124	26.20	183.8	2.79	1.75	1472.
150	5.34	33.70	149	26.63	143.6	3.19	2.31	1473.
175	5.15	33.84	174	26.76	131.3	3.53	2.87	1473.
200	4.92	33.87	199	26.81	126.7	3.85	3.49	1472.
225	4.68	33.87	223	26.84	124.1	4.16	4.17	1472.
250	4.49	33.89	248	26.88	121.0	4.47	4.91	1471.
300	4.29	33.94	298	26.94	115.5	5.06	6.56	1472.
400	3.97	34.04	397	27.05	105.4	6.16	10.47	1472.
500	3.78	34.14	496	27.15	96.8	7.17	15.12	1473.
600	3.57	34.22	595	27.23	89.6	8.11	20.36	1474.
800	3.20	34.35	793	27.37	77.2	9.78	32.24	1476.
1000	2.90	34.42	990	27.45	70.4	11.26	45.74	1478.
1200	2.62	34.50	1188	27.54	62.5	12.58	60.61	1480.
1500	2.29	34.55	1484	27.61	56.5	14.38	85.26	1484.


TEMPERATURE, C
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12
16
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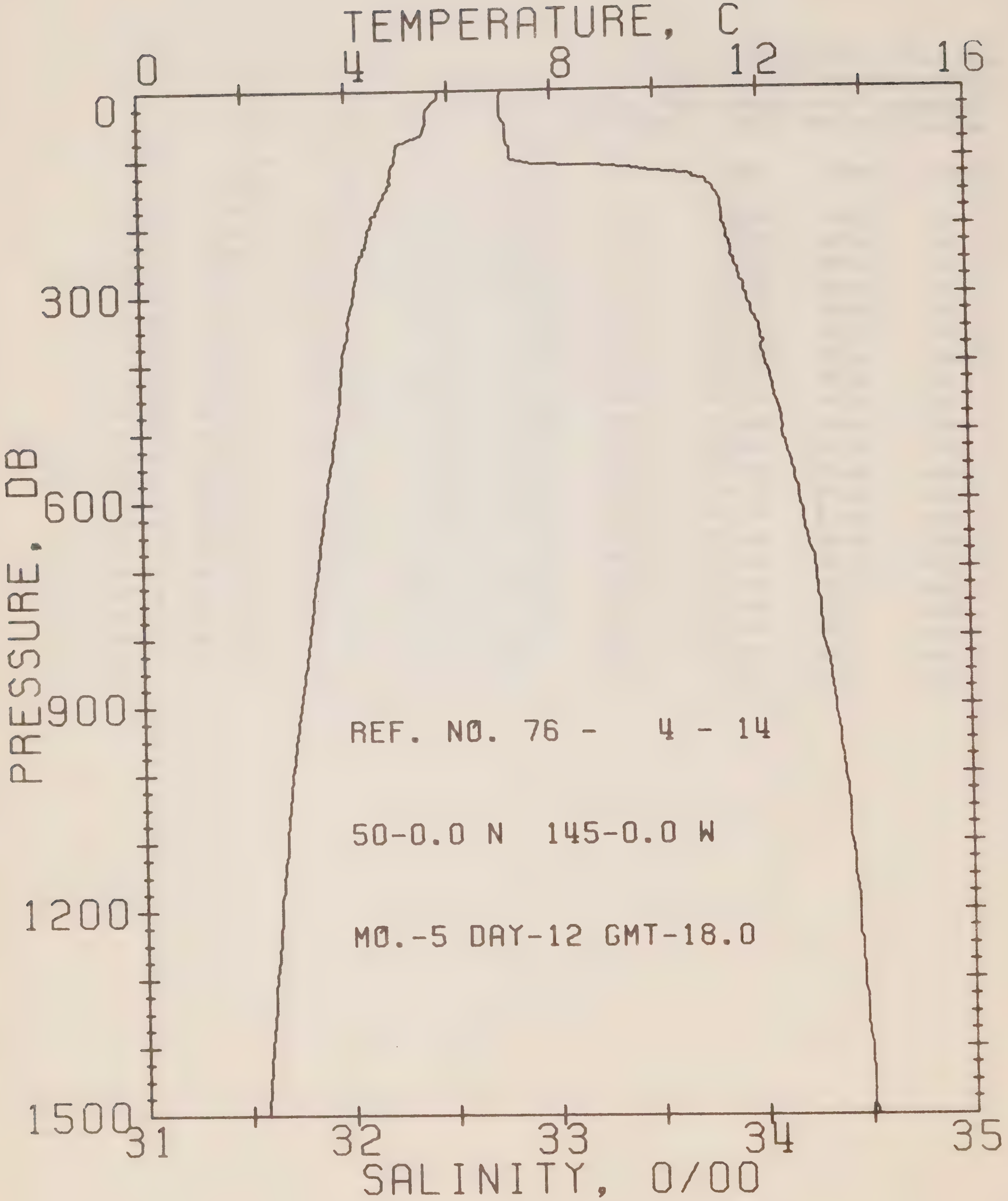
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 10
50-0.0 N 145-0.0 W
MO.-5 DAY-11 GMT-17.2
31
32
33
34
35
SALINITY, 0/00

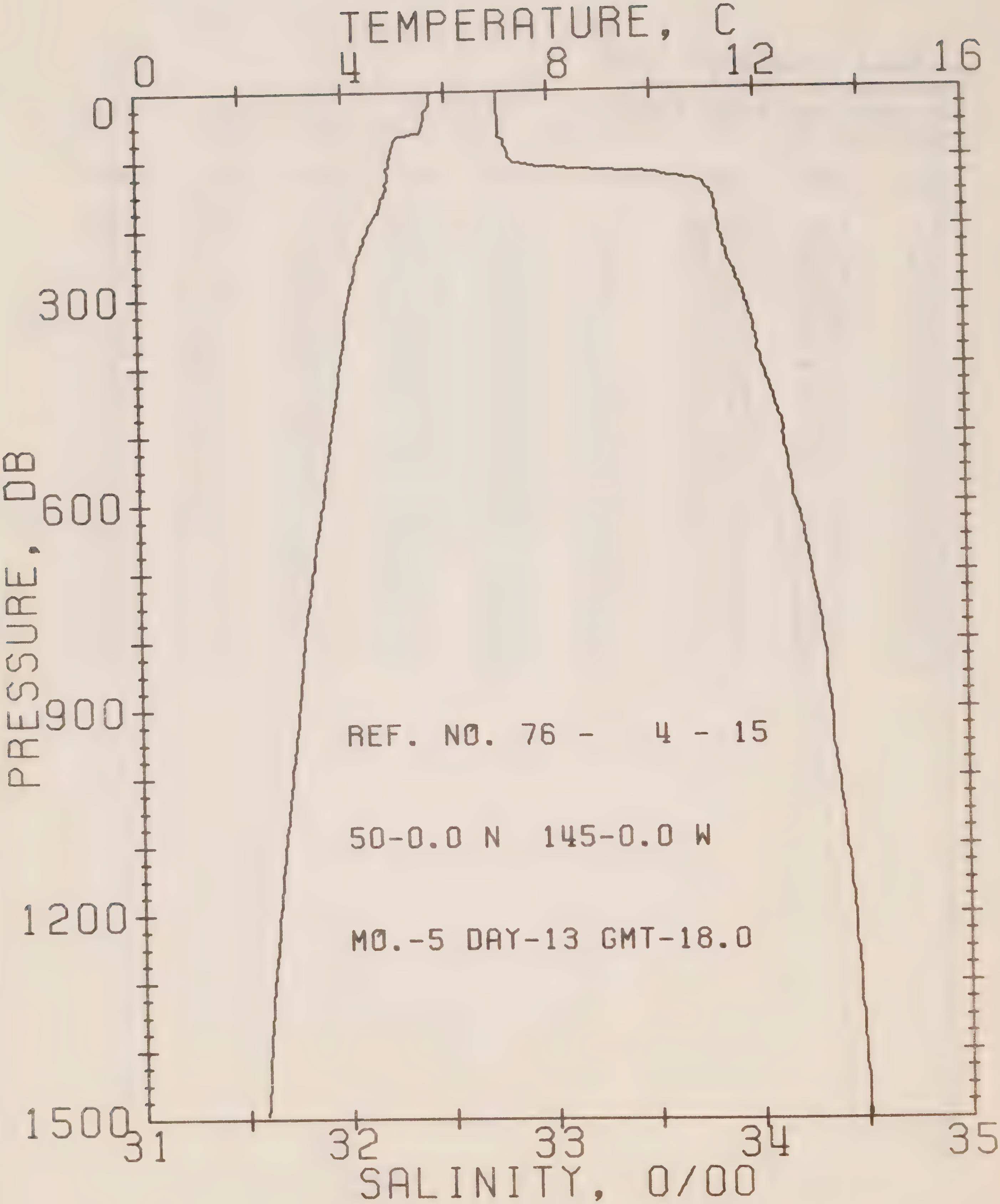
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 10 DATE 11/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.2
RESULTS OF STP CAST 308 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.58	32.75	0	25.85	215.7	0.0	0.0	1470.
10	5.58	32.75	10	25.85	216.0	0.22	0.01	1471.
20	5.58	32.75	20	25.86	215.8	0.43	0.04	1471.
30	5.58	32.77	30	25.87	214.7	0.65	0.10	1471.
50	5.56	32.77	50	25.87	214.7	1.08	0.27	1471.
75	5.02	32.79	75	25.95	207.5	1.61	0.61	1469.
100	4.97	32.84	99	26.00	203.1	2.12	1.07	1470.
125	4.90	33.71	124	26.69	137.4	2.53	1.54	1471.
150	4.79	33.79	149	26.76	131.0	2.87	2.00	1471.
175	4.63	33.81	174	26.80	127.7	3.19	2.54	1471.
200	4.43	33.83	199	26.84	124.4	3.50	3.14	1470.
225	4.36	33.85	223	26.86	122.4	3.81	3.81	1471.
250	4.27	33.87	248	26.88	120.1	4.11	4.54	1471.
300	4.11	33.93	298	26.95	114.1	4.70	6.18	1471.
400	3.88	34.03	397	27.05	105.3	5.80	10.08	1472.
500	3.71	34.11	496	27.13	98.4	6.81	14.74	1473.
600	3.53	34.19	595	27.21	91.4	7.76	20.04	1474.
800	3.16	34.30	793	27.34	80.2	9.48	32.25	1475.
1000	2.85	34.38	990	27.43	72.5	11.00	46.21	1478.
1200	2.59	34.44	1188	27.50	66.3	12.38	61.69	1480.
1500	2.32	34.51	1483	27.58	59.7	14.27	87.61	1484.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 14
50-0.0 N 145-0.0 W
MO.-5 DAY-12 GMT-18.0
31
32
33
34
35
SALINITY, 0/00

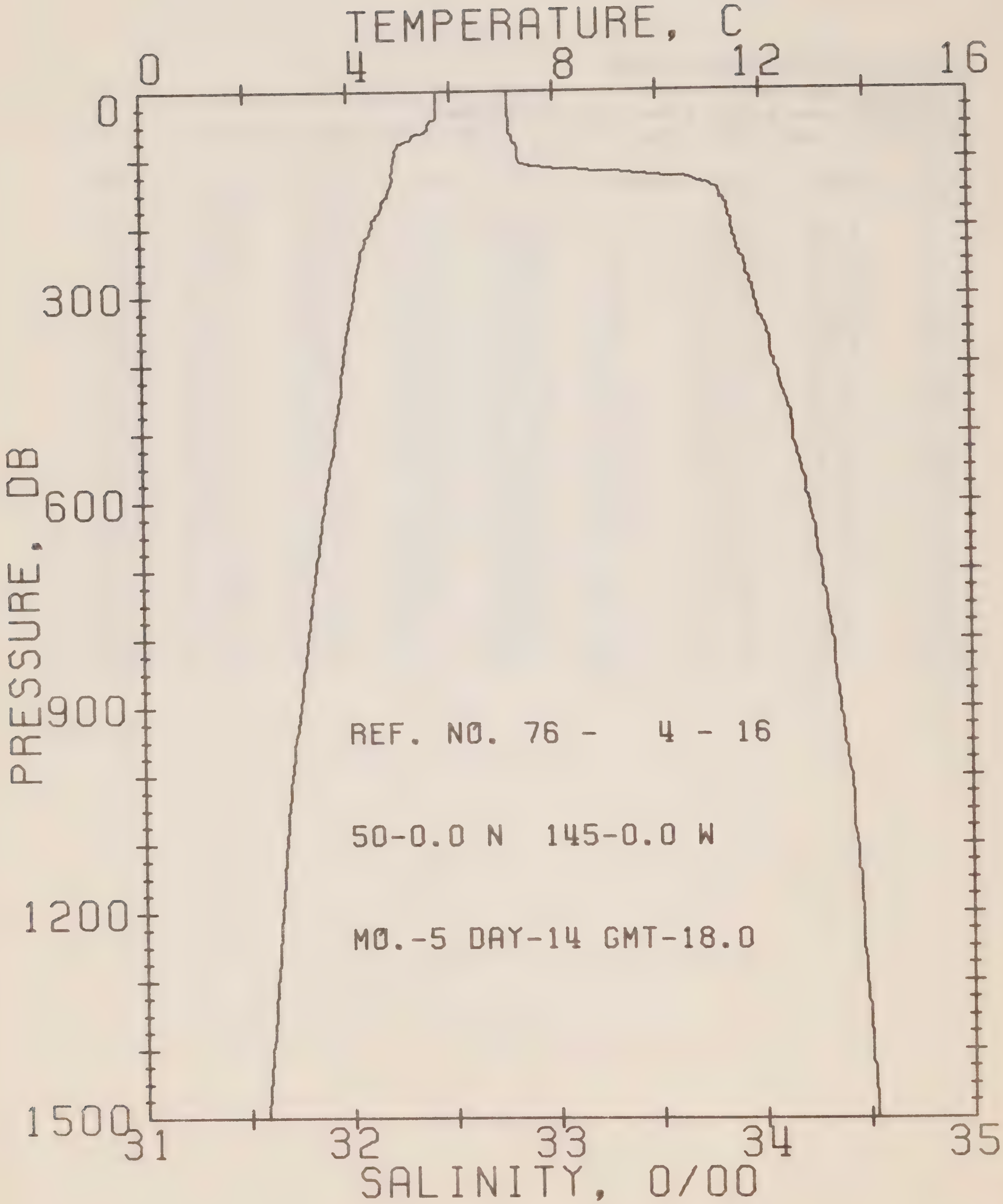
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 14 DATE 12/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 18.0
RESULTS OF STP CAST 299 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.81	32.76	0	25.83	217.5	0.0	0.0	1471.
10	5.81	32.75	10	25.82	218.6	0.22	0.01	1471.
20	5.68	32.75	20	25.84	217.2	0.44	0.04	1471.
30	5.59	32.75	30	25.85	216.3	0.65	0.10	1471.
50	5.55	32.78	50	25.88	214.1	1.08	0.28	1471.
75	5.14	32.78	75	25.93	209.5	1.62	0.61	1470.
100	4.96	32.80	99	25.96	206.3	2.13	1.08	1470.
125	4.86	33.67	124	26.67	140.0	2.57	1.57	1471.
150	4.76	33.79	149	26.77	130.4	2.91	2.04	1471.
175	4.60	33.82	174	26.81	126.6	3.23	2.57	1471.
200	4.47	33.83	199	26.84	124.5	3.54	3.17	1471.
225	4.37	33.86	223	26.87	121.7	3.85	3.84	1471.
250	4.22	33.88	248	26.90	118.8	4.15	4.57	1470.
300	4.11	33.94	298	26.95	113.9	4.73	6.19	1471.
400	3.88	34.02	397	27.05	105.7	5.82	10.08	1472.
500	3.74	34.11	496	27.13	98.8	6.84	14.76	1473.
600	3.54	34.18	595	27.21	91.8	7.79	20.09	1474.
800	3.19	34.29	793	27.33	81.7	9.51	32.31	1476.
1000	2.84	34.39	990	27.44	71.7	11.04	46.26	1477.
1200	2.59	34.45	1188	27.51	65.6	12.41	61.64	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 15
50-0.0 N 145-0.0 W
MO.-5 DAY-13 GMT-18.0
31
32
33
34
35
SALINITY, 0/00

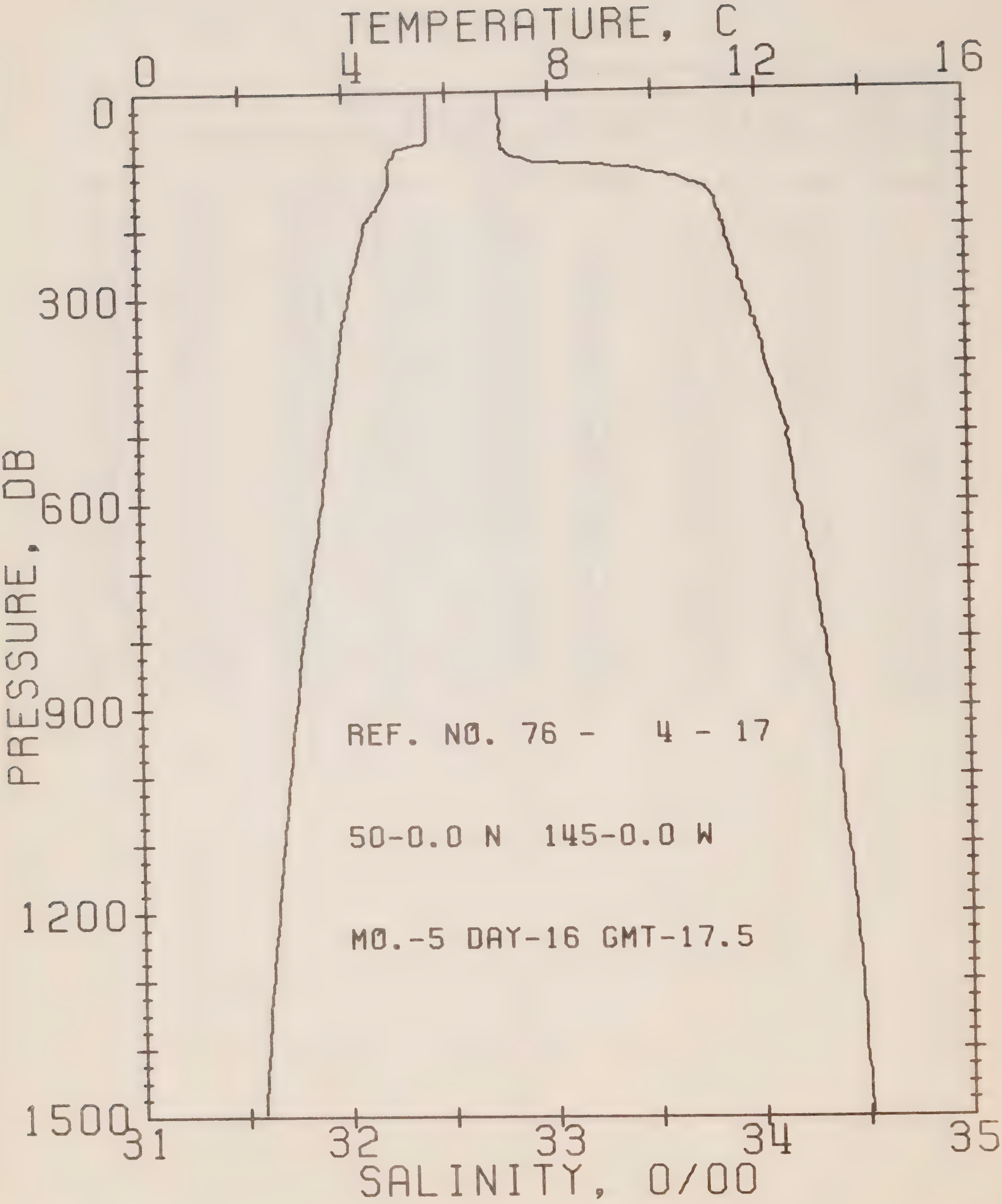
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 15 DATE 13/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 18.0
RESULTS OF STP CAST 317 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.73	32.75	0	25.83	217.3	0.0	0.0	1471.
10	5.72	32.75	10	25.84	217.6	0.22	0.01	1471.
20	5.70	32.75	20	25.84	217.4	0.44	0.04	1471.
30	5.60	32.75	30	25.85	216.4	0.65	0.10	1471.
50	5.55	32.76	50	25.86	215.4	1.08	0.28	1471.
75	4.99	32.79	75	25.95	207.2	1.61	0.61	1469.
100	4.92	32.82	99	25.98	204.3	2.13	1.07	1469.
125	4.88	33.59	124	26.60	146.5	2.58	1.58	1471.
150	4.80	33.79	149	26.76	130.9	2.92	2.06	1471.
175	4.66	33.81	174	26.80	128.1	3.24	2.59	1471.
200	4.47	33.83	199	26.83	124.7	3.56	3.20	1471.
225	4.34	33.85	223	26.86	122.1	3.87	3.87	1470.
250	4.22	33.87	248	26.89	119.6	4.17	4.60	1470.
300	4.08	33.94	298	26.96	113.3	4.75	6.22	1471.
400	3.89	34.02	397	27.04	106.2	5.84	10.11	1472.
500	3.71	34.12	496	27.14	97.2	6.85	14.74	1473.
600	3.54	34.18	595	27.21	92.1	7.80	20.05	1474.
800	3.14	34.31	793	27.35	79.6	9.50	32.15	1475.
1000	2.88	34.38	990	27.42	73.1	11.03	46.20	1478.
1200	2.61	34.45	1188	27.50	66.0	12.42	61.74	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 16
50-0.0 N 145-0.0 W
MO.-5 DAY-14 GMT-18.0
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 16 DATE 14/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 18.0
RESULTS OF STP CAST 310 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.74	32.78	0	25.86	215.3	0.0	0.0	1471.
10	5.74	32.78	10	25.86	215.6	0.22	0.01	1471.
20	5.73	32.78	20	25.86	215.6	0.43	0.04	1471.
30	5.73	32.78	30	25.86	215.6	0.65	0.10	1472.
50	5.58	32.79	50	25.88	213.4	1.08	0.27	1471.
75	5.05	32.81	75	25.96	206.3	1.60	0.61	1470.
100	4.91	32.83	99	25.99	203.5	2.11	1.06	1469.
125	4.87	33.56	124	26.57	148.6	2.58	1.59	1471.
150	4.77	33.80	149	26.77	129.8	2.92	2.07	1471.
175	4.61	33.84	174	26.82	125.3	3.24	2.59	1471.
200	4.45	33.86	199	26.86	122.3	3.54	3.18	1470.
225	4.31	33.88	223	26.89	119.6	3.85	3.84	1470.
250	4.22	33.92	248	26.93	115.9	4.14	4.55	1470.
300	4.10	33.97	298	26.98	111.3	4.71	6.14	1471.
400	3.89	34.06	397	27.08	103.1	5.78	9.95	1472.
500	3.71	34.15	496	27.16	95.3	6.77	14.48	1473.
600	3.50	34.22	595	27.24	88.4	7.69	19.63	1474.
800	3.16	34.34	793	27.36	77.9	9.35	31.44	1476.
1000	2.83	34.42	990	27.46	69.4	10.83	45.02	1477.
1200	2.61	34.47	1188	27.52	64.5	12.17	60.02	1480.
1500	2.31	34.53	1483	27.59	58.1	14.01	85.34	1484.


TEMPERATURE, C
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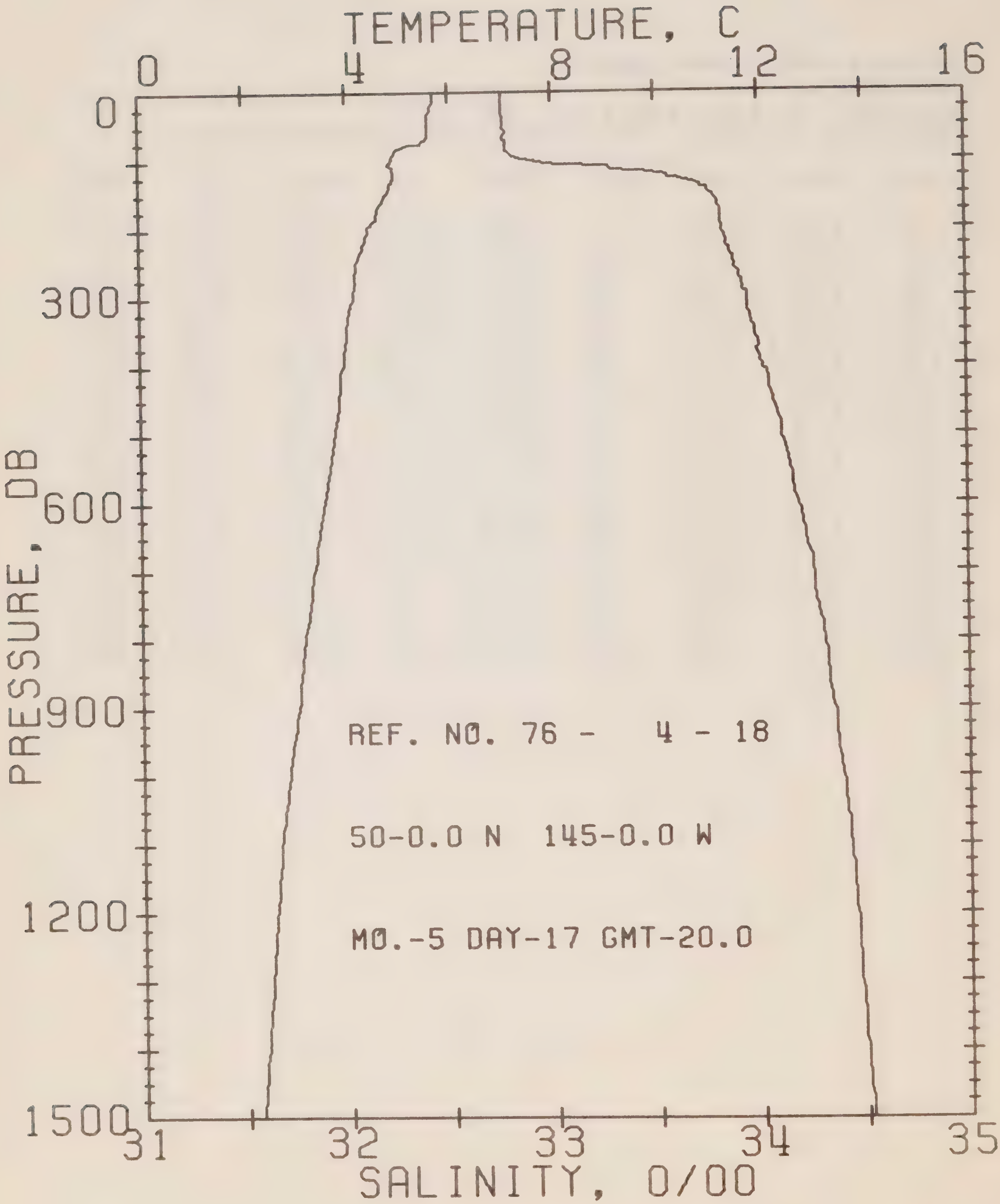
4
8
12
16
PRESSURE, DB
0
300
600
900
1200
1500
REF. NO. 76 - 4 - 17
50-0.0 N 145-0.0 W
MO.-5 DAY-16 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

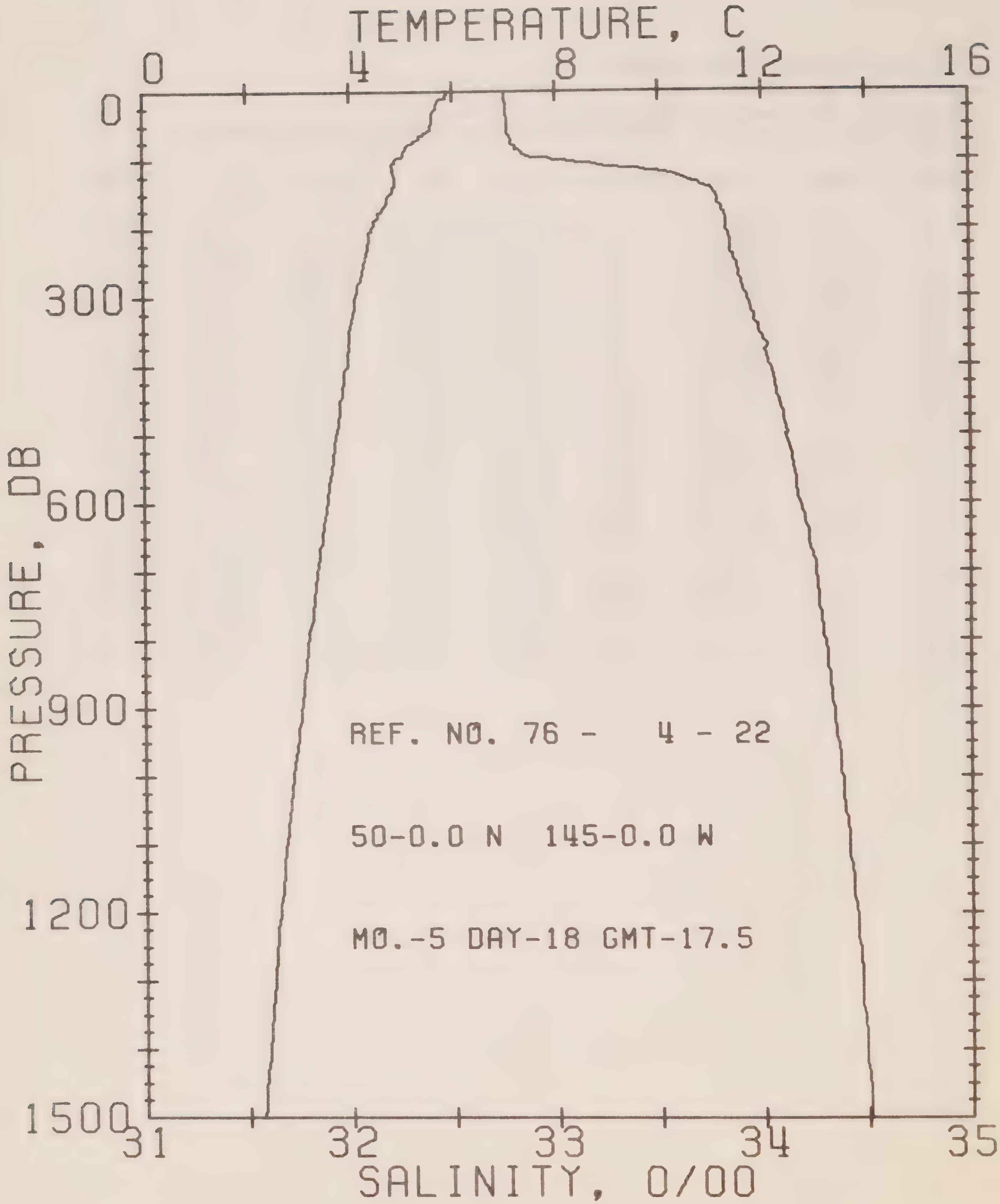
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 17 DATE 16/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 306 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.63	32.75	0	25.85	216.3	0.0	0.0	1471.
10	5.63	32.75	10	25.85	216.6	0.22	0.01	1471.
20	5.63	32.75	20	25.85	216.7	0.43	0.04	1471.
30	5.62	32.75	30	25.85	216.6	0.65	0.10	1471.
50	5.62	32.76	50	25.86	216.0	1.08	0.28	1471.
75	5.57	32.77	75	25.87	215.1	1.62	0.62	1472.
100	4.90	32.89	99	26.04	198.5	2.14	1.09	1469.
125	4.88	33.59	124	26.60	146.5	2.56	1.56	1471.
150	4.77	33.77	149	26.75	131.9	2.91	2.04	1471.
175	4.57	33.81	174	26.81	127.1	3.23	2.58	1470.
200	4.37	33.84	199	26.85	123.0	3.54	3.17	1470.
225	4.29	33.86	223	26.87	120.9	3.85	3.83	1470.
250	4.22	33.89	248	26.91	118.1	4.14	4.56	1470.
300	4.06	33.95	298	26.97	112.6	4.72	6.17	1471.
400	3.85	34.03	397	27.06	104.8	5.80	10.03	1471.
500	3.64	34.14	496	27.16	95.7	6.81	14.62	1472.
600	3.51	34.18	595	27.21	91.8	7.75	19.88	1473.
800	3.11	34.31	793	27.35	79.5	9.45	32.01	1475.
1000	2.84	34.38	990	27.43	72.4	10.97	45.92	1477.
1200	2.59	34.44	1188	27.50	66.3	12.36	61.44	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 18
50-0.0 N 145-0.0 W
MO.-5 DAY-17 GMT-20.0
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 18   DATE 17/ 5/76
POSITION 50- 0.0N, 145- 0.0W   GMT 20.0
RESULTS OF STP CAST   352 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.72	32.76	0	25.84	216.5	0.0	0.0	1471.
10	5.70	32.76	10	25.85	216.6	0.22	0.01	1471.
20	5.66	32.76	20	25.85	216.3	0.43	0.04	1471.
30	5.62	32.76	30	25.86	215.9	0.65	0.10	1471.
50	5.60	32.77	50	25.87	215.1	1.08	0.27	1471.
75	5.46	32.78	75	25.89	213.1	1.62	0.62	1471.
100	4.88	32.90	99	26.05	197.9	2.13	1.08	1469.
125	4.93	33.57	124	26.58	148.5	2.56	1.56	1471.
150	4.77	33.78	149	26.76	131.2	2.90	2.04	1471.
175	4.61	33.82	174	26.81	126.7	3.22	2.57	1471.
200	4.44	33.83	199	26.84	124.4	3.54	3.18	1470.
225	4.33	33.85	223	26.86	122.0	3.85	3.84	1470.
250	4.20	33.88	248	26.90	118.6	4.15	4.57	1470.
300	4.12	33.95	298	26.96	113.0	4.72	6.19	1471.
400	3.92	34.02	397	27.04	106.6	5.83	10.11	1472.
500	3.75	34.11	496	27.13	98.8	6.85	14.79	1473.
600	3.54	34.18	595	27.21	91.8	7.80	20.12	1474.
800	3.15	34.31	793	27.35	79.6	9.51	32.26	1475.
1000	2.81	34.39	990	27.44	71.1	11.02	46.12	1477.
1200	2.55	34.46	1188	27.52	64.8	12.37	61.28	1480.


TEMPERATURE, C
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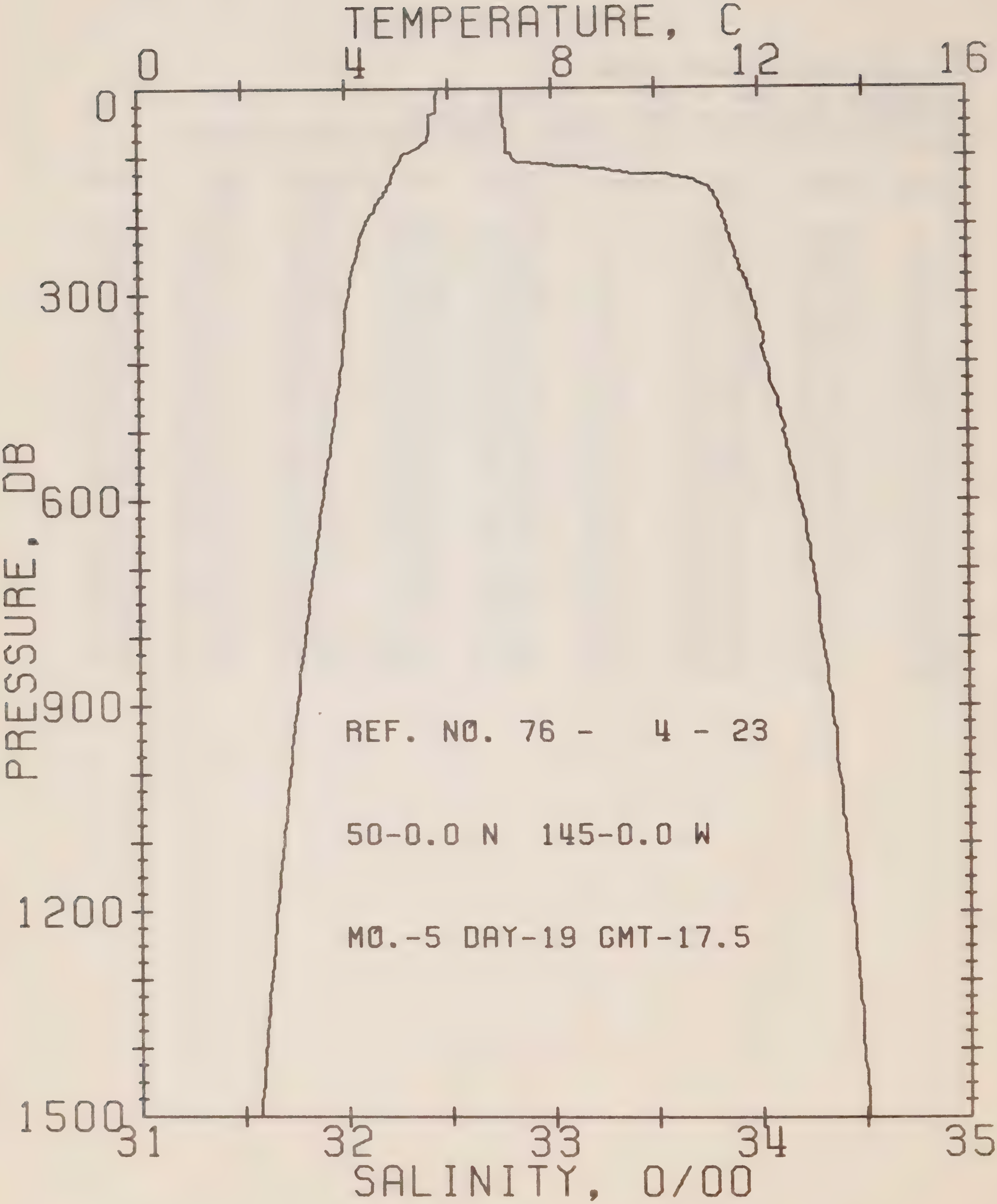
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 22
50-0.0 N 145-0.0 W
MO.-5 DAY-18 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 22 DATE 18/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 335 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.89	32.75	0	25.82	219.2	0.0	0.0	1472.
10	5.86	32.75	10	25.82	219.2	0.22	0.01	1472.
20	5.68	32.76	20	25.85	216.4	0.44	0.04	1471.
30	5.62	32.76	30	25.86	215.9	0.65	0.10	1471.
50	5.58	32.77	50	25.87	214.9	1.08	0.27	1471.
75	5.21	32.79	75	25.93	209.6	1.62	0.61	1470.
100	4.88	32.99	99	26.12	191.2	2.12	1.07	1469.
125	4.89	33.61	124	26.61	145.3	2.53	1.53	1471.
150	4.78	33.78	149	26.76	131.3	2.88	2.02	1471.
175	4.60	33.81	174	26.80	127.4	3.20	2.55	1471.
200	4.42	33.83	199	26.84	124.3	3.52	3.15	1470.
225	4.34	33.85	223	26.86	122.1	3.82	3.82	1470.
250	4.27	33.87	248	26.89	119.9	4.13	4.55	1471.
300	4.09	33.93	298	26.95	114.3	4.71	6.19	1471.
400	3.93	34.03	397	27.05	105.6	5.81	10.10	1472.
500	3.71	34.12	496	27.14	97.5	6.82	14.74	1473.
600	3.54	34.18	595	27.20	92.2	7.77	20.06	1474.
800	3.16	34.30	793	27.33	80.9	9.49	32.27	1475.
1000	2.85	34.38	990	27.42	72.9	11.03	46.35	1478.
1200	2.58	34.45	1188	27.50	65.9	12.42	61.91	1480.


TEMPERATURE, C
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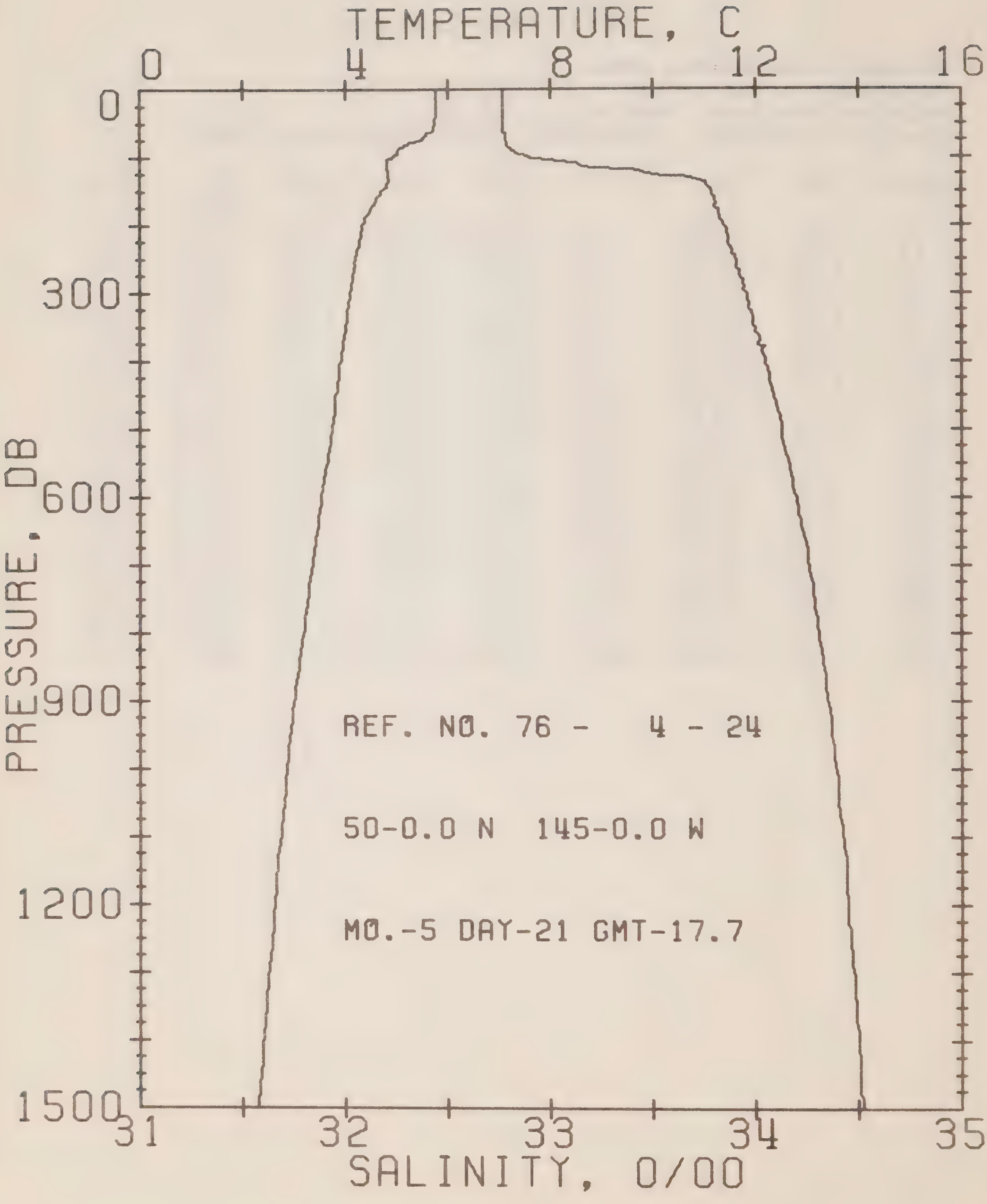
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 23
50-0.0 N 145-0.0 W
MO.-5 DAY-19 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 23 DATE 19/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 326 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.78	32.76	0	25.84	217.2	0.0	0.0	1471.
10	5.77	32.76	10	25.84	217.4	0.22	0.01	1471.
20	5.77	32.76	20	25.84	217.5	0.43	0.04	1472.
30	5.77	32.76	30	25.84	217.6	0.65	0.10	1472.
50	5.63	32.77	50	25.86	215.5	1.09	0.28	1471.
75	5.58	32.78	75	25.88	214.4	1.62	0.62	1472.
100	5.09	32.81	99	25.96	207.0	2.15	1.09	1470.
125	4.91	33.40	124	26.44	161.0	2.62	1.63	1471.
150	4.77	33.77	149	26.75	132.0	2.97	2.12	1471.
175	4.56	33.81	174	26.81	127.0	3.30	2.65	1470.
200	4.35	33.84	199	26.85	122.8	3.61	3.25	1470.
225	4.26	33.86	223	26.88	120.3	3.91	3.90	1470.
250	4.18	33.89	248	26.91	117.7	4.21	4.62	1470.
300	4.04	33.96	298	26.98	111.4	4.78	6.22	1471.
400	3.91	34.03	397	27.05	105.7	5.86	10.07	1472.
500	3.73	34.11	496	27.13	98.2	6.88	14.72	1473.
600	3.53	34.19	595	27.21	91.4	7.82	20.02	1474.
800	3.18	34.29	793	27.33	81.2	9.53	32.20	1476.
1000	2.87	34.37	990	27.42	73.3	11.07	46.27	1478.
1200	2.61	34.44	1188	27.49	66.8	12.47	61.91	1480.


TEMPERATURE, C
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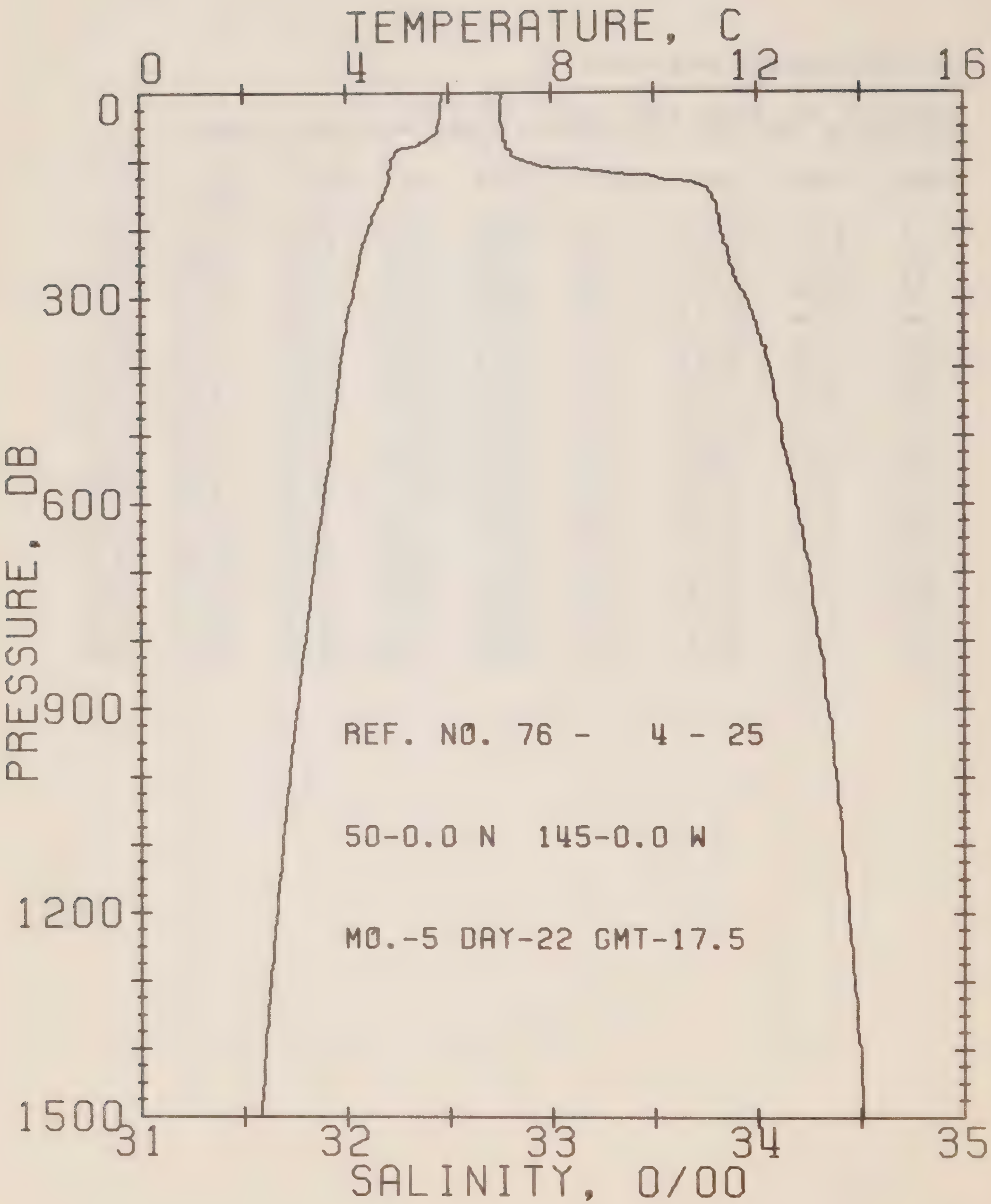
4
8
12
16
PRESSURE, DB
0
300
600
900
1200
1500
REF. NO. 76 - 4 - 24
50-0.0 N 145-0.0 W
MO.-5 DAY-21 GMT-17.7
31
32
33
34
35
SALINITY, 0/00

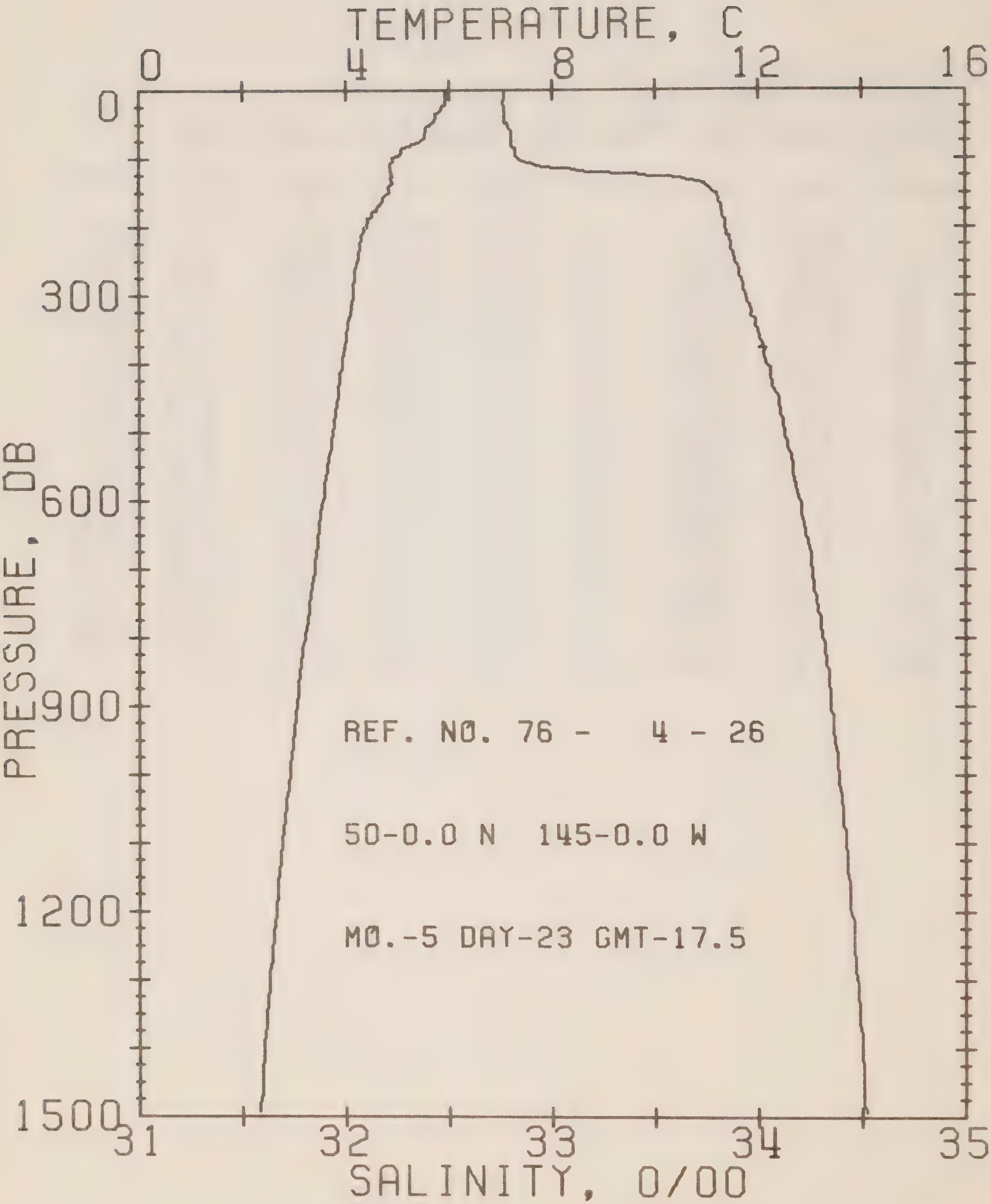
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 24 DATE 21/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.7
RESULTS OF STP CAST 339 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.77	32.77	0	25.85	216.3	0.0	0.0	1471.
10	5.77	32.77	10	25.85	216.7	0.22	0.01	1471.
20	5.76	32.77	20	25.85	216.6	0.43	0.04	1471.
30	5.75	32.77	30	25.85	216.6	0.65	0.10	1472.
50	5.74	32.77	50	25.85	216.7	1.08	0.28	1472.
75	5.45	32.78	75	25.89	213.0	1.62	0.62	1471.
100	4.92	32.89	99	26.04	199.1	2.14	1.08	1469.
125	4.83	33.49	124	26.52	153.7	2.58	1.58	1470.
150	4.71	33.78	149	26.77	130.7	2.92	2.06	1471.
175	4.49	33.80	174	26.81	126.7	3.24	2.59	1470.
200	4.32	33.84	199	26.86	122.1	3.55	3.18	1470.
225	4.27	33.87	223	26.88	119.9	3.85	3.84	1470.
250	4.18	33.90	248	26.92	116.9	4.15	4.55	1470.
300	4.08	33.95	298	26.97	112.2	4.72	6.16	1471.
400	3.90	34.05	397	27.07	104.0	5.81	10.02	1472.
500	3.72	34.13	496	27.15	96.9	6.81	14.62	1473.
600	3.53	34.20	595	27.22	90.5	7.75	19.90	1474.
800	3.18	34.31	793	27.34	80.1	9.45	31.99	1476.
1000	2.85	34.39	990	27.44	71.8	10.97	45.84	1478.
1200	2.61	34.45	1188	27.51	65.9	12.34	61.21	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 25
50-0.0 N 145-0.0 W
MO.-5 DAY-22 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

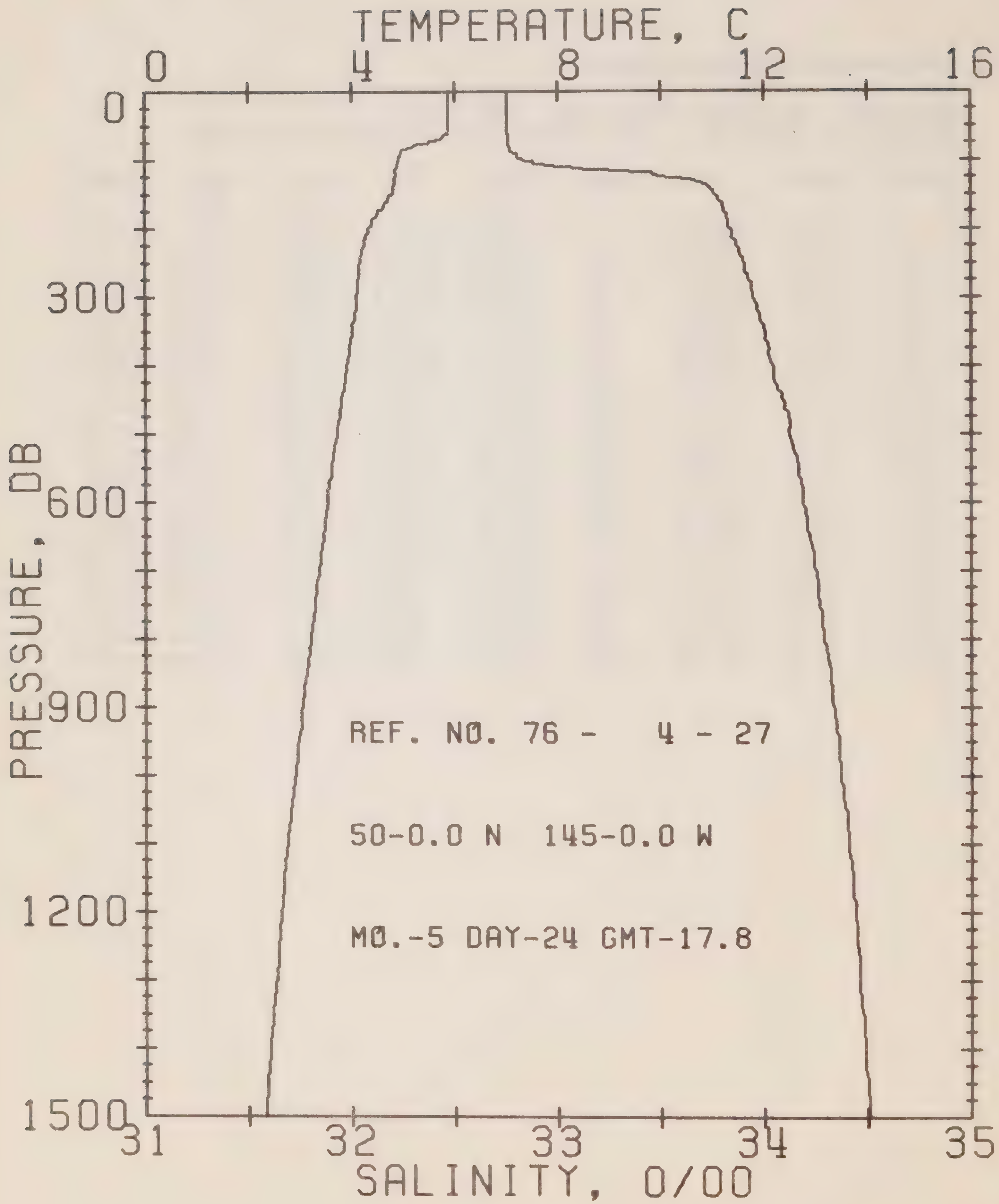
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 25 DATE 22/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 354 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.87	32.75	0	25.82	219.0	0.0	0.0	1472.
10	5.85	32.75	10	25.82	218.8	0.22	0.01	1472.
20	5.85	32.75	20	25.82	219.1	0.44	0.04	1472.
30	5.85	32.75	30	25.82	219.2	0.66	0.10	1472.
50	5.79	32.76	50	25.84	218.1	1.09	0.28	1472.
75	5.42	32.78	75	25.89	212.6	1.63	0.62	1471.
100	4.88	32.88	99	26.03	199.7	2.15	1.08	1469.
125	4.84	33.53	124	26.55	150.5	2.60	1.59	1470.
150	4.72	33.78	149	26.77	130.5	2.94	2.07	1471.
175	4.54	33.81	174	26.81	126.8	3.26	2.60	1470.
200	4.42	33.83	199	26.84	124.3	3.57	3.20	1470.
225	4.30	33.86	223	26.87	120.9	3.88	3.86	1470.
250	4.24	33.87	248	26.89	119.8	4.18	4.59	1470.
300	4.11	33.95	298	26.97	112.9	4.76	6.23	1471.
400	3.87	34.06	397	27.08	102.7	5.84	10.05	1472.
500	3.72	34.12	496	27.14	97.7	6.84	14.63	1473.
600	3.54	34.19	595	27.21	91.3	7.78	19.92	1474.
800	3.19	34.30	793	27.33	80.9	9.49	32.11	1476.
1000	2.88	34.38	990	27.43	72.8	11.02	46.12	1478.
1200	2.62	34.44	1188	27.50	66.7	12.41	61.68	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 26
50-0.0 N 145-0.0 W
MO.-5 DAY-23 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 26 DATE 23/ 5/76
POSITION 50- 0.0N. 145- 0.0W GMT 17.5
RESULTS OF STP CAST 349 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.91	32.77	0	25.83	217.9	0.0	0.0	1472.
10	5.91	32.77	10	25.83	218.2	0.22	0.01	1472.
20	5.91	32.76	20	25.82	219.1	0.44	0.04	1472.
30	5.81	32.77	30	25.84	217.3	0.65	0.10	1472.
50	5.64	32.78	50	25.87	214.8	1.09	0.28	1471.
75	5.41	32.80	75	25.91	211.0	1.62	0.61	1471.
100	4.92	32.84	99	26.00	202.9	2.14	1.08	1469.
125	4.87	33.47	124	26.50	155.3	2.60	1.61	1470.
150	4.82	33.79	149	26.76	131.1	2.95	2.09	1471.
175	4.59	33.82	174	26.81	126.5	3.27	2.62	1471.
200	4.39	33.84	199	26.85	123.2	3.58	3.22	1470.
225	4.26	33.87	223	26.89	119.8	3.88	3.87	1470.
250	4.22	33.89	248	26.91	118.1	4.18	4.59	1470.
300	4.12	33.94	298	26.96	113.8	4.76	6.21	1471.
400	3.91	34.04	397	27.06	104.9	5.85	10.09	1472.
500	3.73	34.13	496	27.15	97.1	6.85	14.69	1473.
600	3.54	34.20	595	27.22	90.6	7.79	19.95	1474.
800	3.20	34.31	793	27.34	80.3	9.50	32.07	1476.
1000	2.90	34.39	990	27.43	72.4	11.01	45.98	1478.
1200	2.64	34.44	1188	27.50	66.6	12.40	61.46	1480.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4
8
12
16
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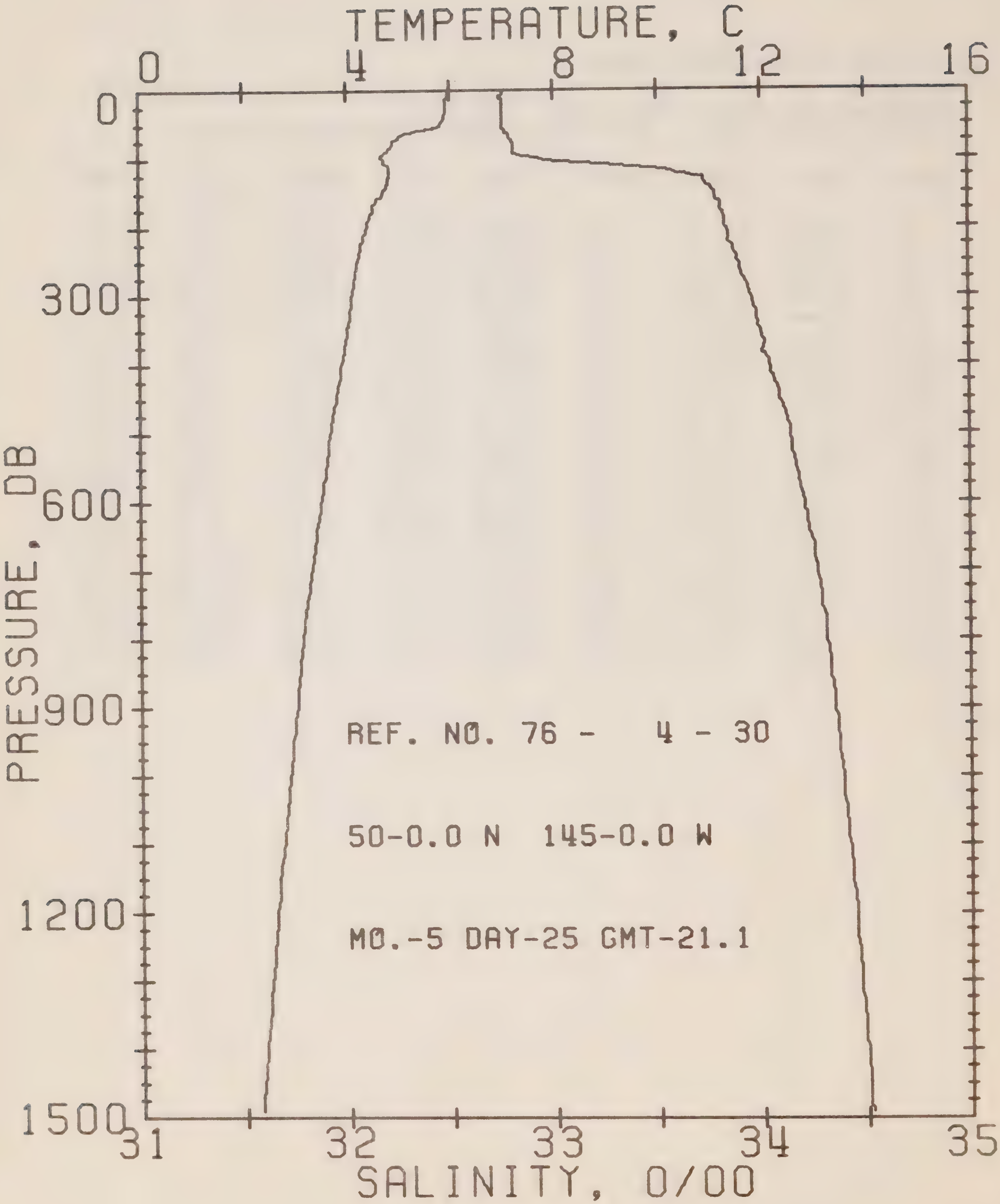
0
300
600
900
1200
1500
REF. NØ. 76 - 4 - 27
50-0.0 N 145-0.0 W
MØ.-5 DAY-24 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 27 DATE 24/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 343 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.86	32.75	0	25.82	218.9	0.0	0.0	1472.
10	5.86	32.75	10	25.82	219.2	0.22	0.01	1472.
20	5.86	32.75	20	25.82	219.3	0.44	0.04	1472.
30	5.86	32.75	30	25.82	219.4	0.66	0.10	1472.
50	5.86	32.75	50	25.82	219.6	1.10	0.28	1472.
75	5.46	32.76	75	25.87	214.5	1.64	0.63	1471.
100	4.90	32.83	99	25.99	203.4	2.16	1.09	1469.
125	4.84	33.54	124	26.56	149.8	2.61	1.60	1470.
150	4.78	33.76	149	26.74	132.9	2.96	2.08	1471.
175	4.51	33.81	174	26.81	126.5	3.28	2.62	1470.
200	4.32	33.84	199	26.86	122.4	3.59	3.21	1470.
225	4.22	33.87	223	26.89	119.4	3.89	3.87	1470.
250	4.14	33.90	248	26.92	116.5	4.19	4.58	1470.
300	4.08	33.95	298	26.97	112.6	4.76	6.18	1471.
400	3.90	34.04	397	27.06	104.6	5.84	10.05	1472.
500	3.70	34.12	496	27.14	97.4	6.85	14.65	1473.
600	3.51	34.19	595	27.22	91.1	7.78	19.89	1474.
800	3.20	34.29	793	27.32	81.7	9.50	32.13	1476.
1000	2.89	34.37	990	27.42	73.6	11.05	46.25	1478.
1200	2.62	34.44	1188	27.50	66.7	12.44	61.88	1480.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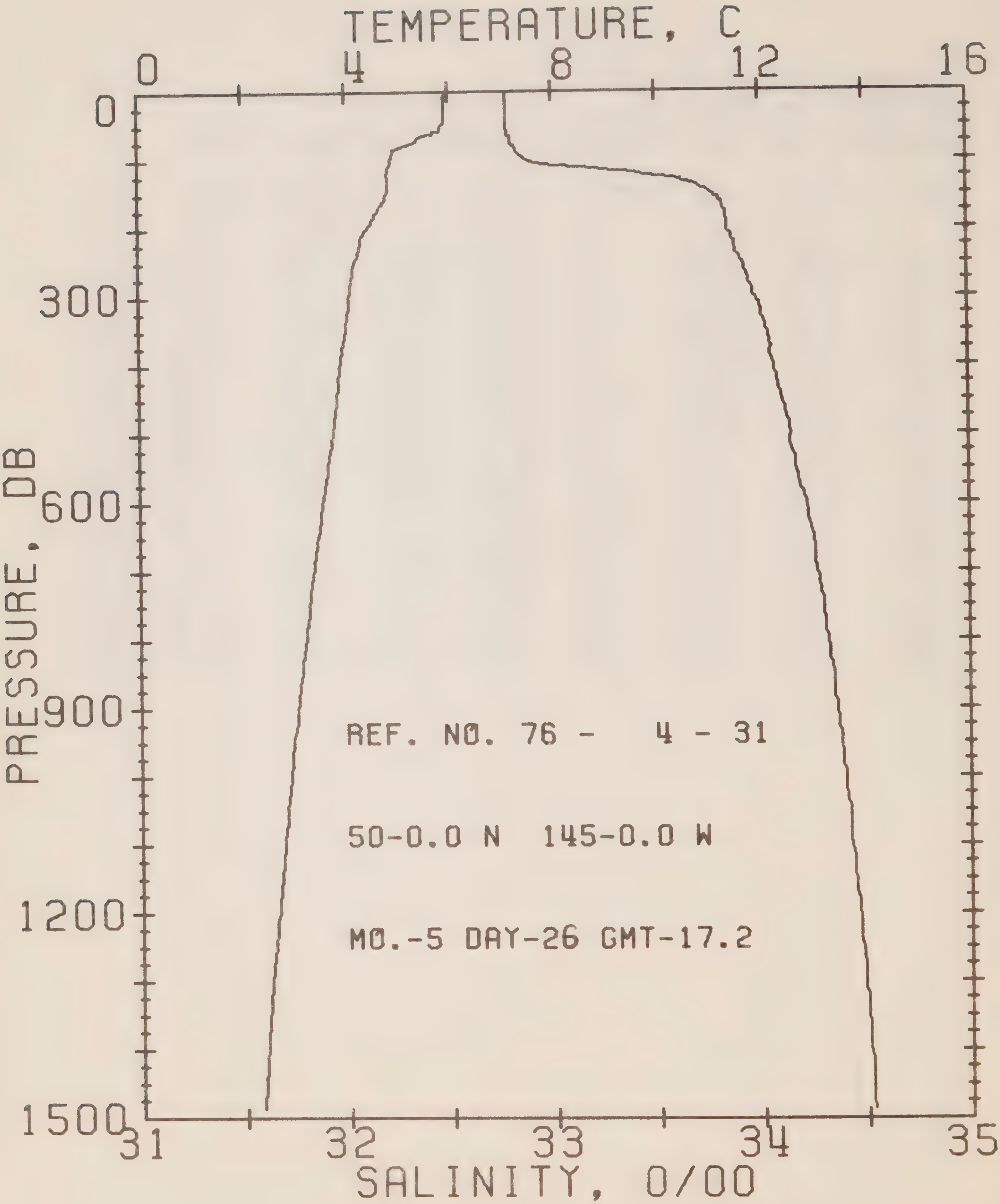
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 30
50-0.0 N 145-0.0 W
MO.-5 DAY-25 GMT-21.1
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 30 DATE 25/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 21.1
RESULTS OF STP CAST 377 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.98	32.75	0	25.80	220.2	0.0	0.0	1472.
10	5.97	32.74	10	25.80	221.2	0.22	0.01	1472.
20	5.92	32.75	20	25.81	220.0	0.44	0.04	1472.
30	5.91	32.75	30	25.81	220.0	0.66	0.10	1472.
50	5.82	32.75	50	25.82	219.1	1.10	0.28	1472.
75	4.91	32.80	75	25.97	205.5	1.63	0.62	1469.
100	4.71	32.94	99	26.10	193.2	2.14	1.07	1469.
125	4.82	33.68	124	26.67	139.0	2.54	1.53	1471.
150	4.69	33.78	149	26.77	130.4	2.88	2.00	1471.
175	4.50	33.81	174	26.81	126.3	3.20	2.53	1470.
200	4.38	33.83	199	26.84	123.8	3.51	3.13	1470.
225	4.28	33.86	223	26.88	120.7	3.82	3.79	1470.
250	4.19	33.89	248	26.91	117.7	4.11	4.51	1470.
300	4.09	33.95	298	26.97	112.5	4.69	6.12	1471.
400	3.88	34.04	397	27.06	104.6	5.78	9.99	1472.
500	3.66	34.14	496	27.16	95.6	6.77	14.56	1472.
600	3.48	34.21	595	27.23	89.2	7.70	19.76	1473.
800	3.12	34.31	793	27.35	79.4	9.38	31.68	1475.
1000	2.86	34.39	990	27.44	71.9	10.89	45.52	1478.
1200	2.60	34.45	1188	27.51	65.7	12.27	60.99	1480.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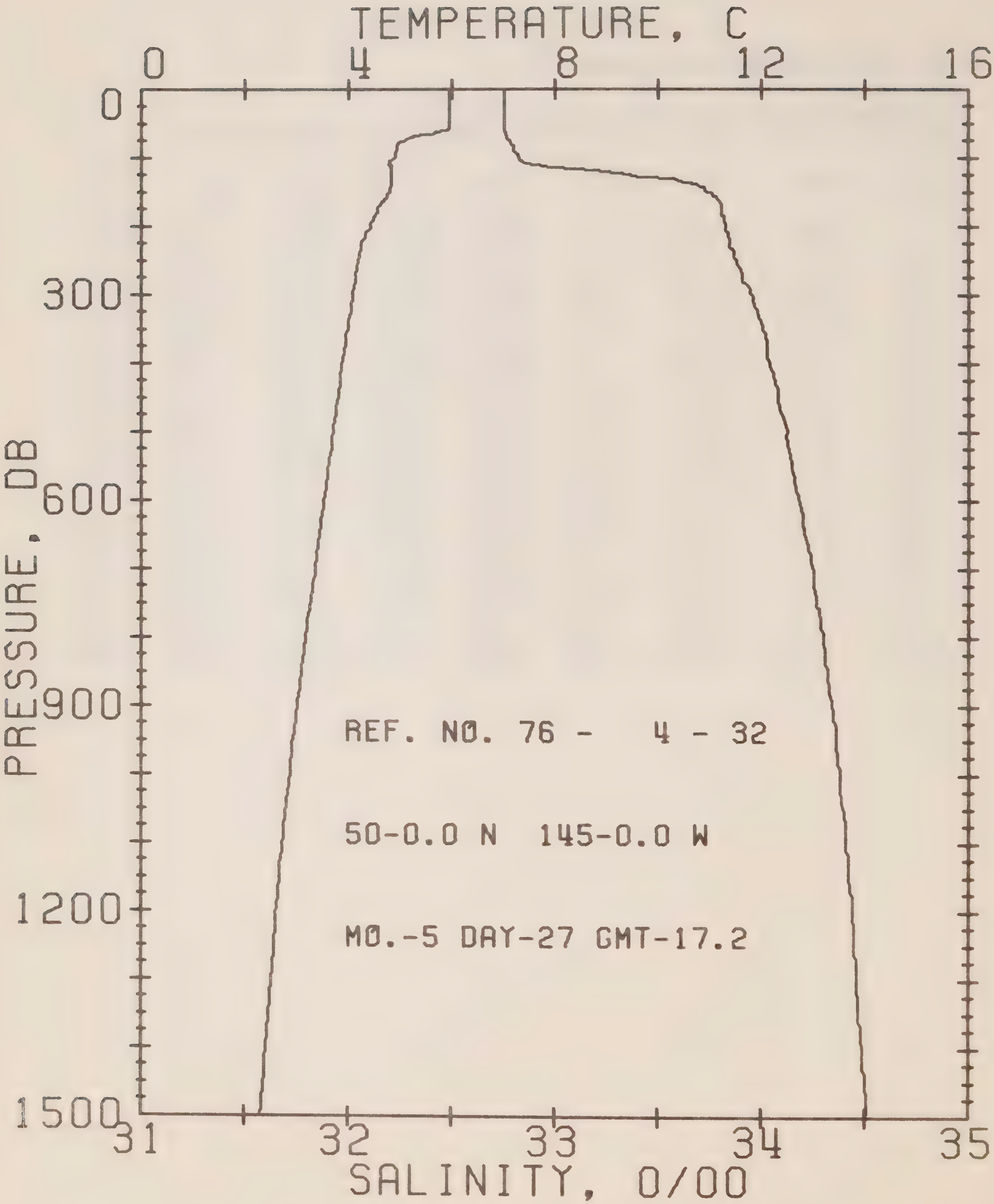
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 31
50-0.0 N 145-0.0 W
MO.-5 DAY-26 GMT-17.2
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 31 DATE 26/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.2
RESULTS OF STP CAST 400 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.94	32.78	0	25.83	217.5	0.0	0.0	1472.
10	5.93	32.78	10	25.83	217.8	0.22	0.01	1472.
20	5.93	32.78	20	25.83	217.9	0.44	0.04	1472.
30	5.93	32.78	30	25.83	218.0	0.65	0.10	1472.
50	5.87	32.78	50	25.84	217.5	1.09	0.28	1472.
75	5.27	32.80	75	25.93	209.4	1.62	0.62	1470.
100	4.88	32.88	99	26.03	199.4	2.13	1.07	1469.
125	4.83	33.56	124	26.58	148.2	2.57	1.57	1470.
150	4.78	33.78	149	26.76	131.3	2.92	2.06	1471.
175	4.60	33.84	174	26.83	125.2	3.24	2.59	1471.
200	4.41	33.85	199	26.85	122.6	3.55	3.18	1470.
225	4.27	33.88	223	26.89	119.2	3.85	3.83	1470.
250	4.17	33.92	248	26.93	115.3	4.15	4.54	1470.
300	4.05	33.98	298	27.00	110.0	4.71	6.12	1471.
400	3.87	34.07	397	27.08	102.2	5.77	9.89	1472.
500	3.73	34.15	496	27.16	95.6	6.76	14.44	1473.
600	3.53	34.22	595	27.24	89.0	7.69	19.65	1474.
800	3.19	34.32	793	27.35	79.4	9.37	31.58	1476.
1000	2.88	34.40	990	27.44	71.3	10.87	45.33	1478.
1200	2.63	34.46	1188	27.51	65.0	12.23	60.62	1480.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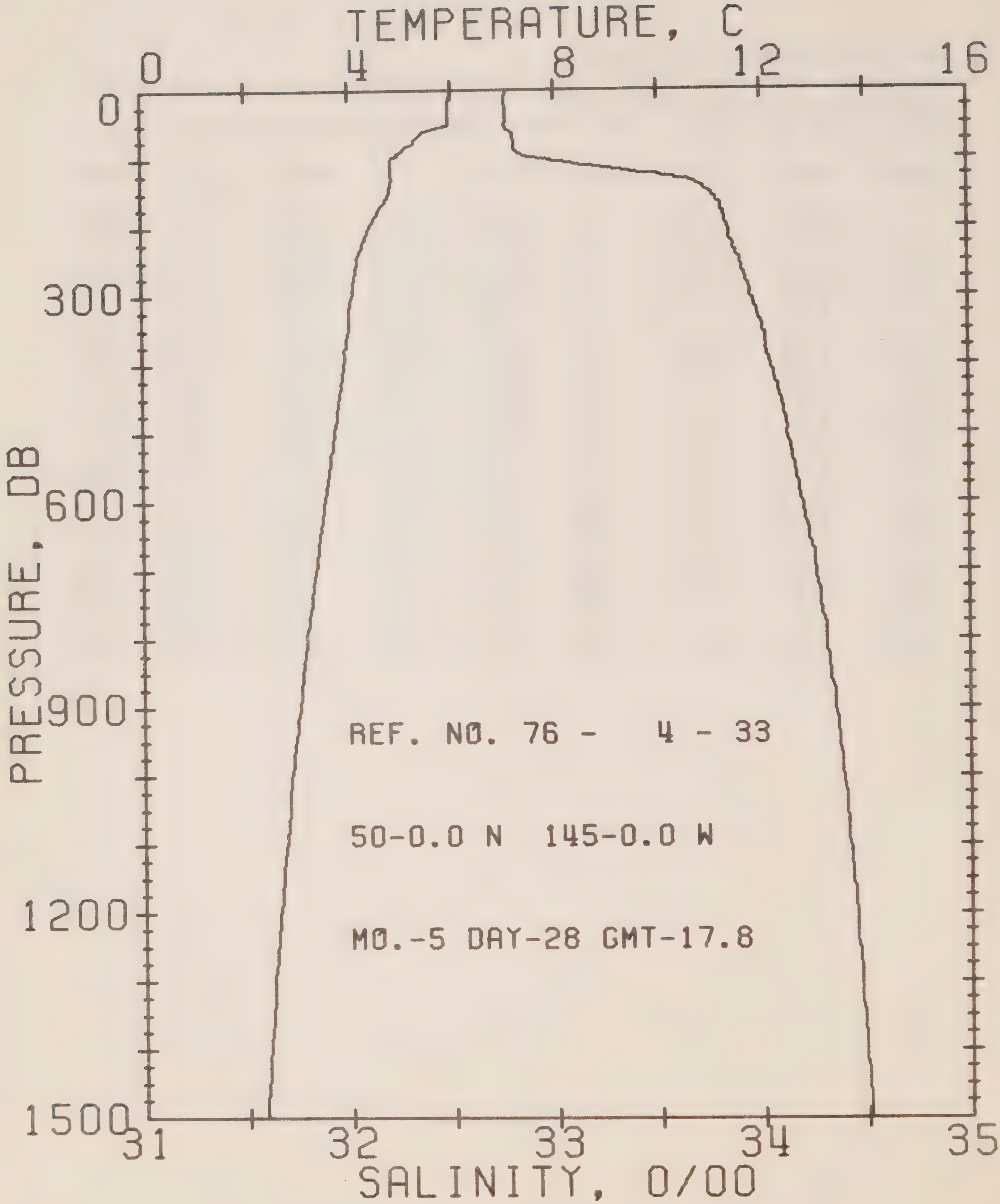
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 32
50-0.0 N 145-0.0 W
MO.-5 DAY-27 GMT-17.2
31
32
33
34
35
SALINITY, O/OO

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 32 DATE 27/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.2
RESULTS OF STP CAST 374 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.95	32.75	0	25.81	219.9	0.0	0.0	1472.
10	5.95	32.75	10	25.81	220.2	0.22	0.01	1472.
20	5.95	32.75	20	25.81	220.3	0.44	0.04	1472.
30	5.95	32.75	30	25.81	220.4	0.66	0.10	1472.
50	5.95	32.75	50	25.81	220.7	1.10	0.28	1473.
75	5.07	32.78	75	25.93	208.7	1.64	0.63	1470.
100	4.88	32.82	99	25.99	204.0	2.16	1.08	1469.
125	4.84	33.37	124	26.43	162.5	2.63	1.62	1470.
150	4.79	33.75	149	26.73	133.8	2.99	2.12	1471.
175	4.56	33.81	174	26.81	127.1	3.31	2.66	1470.
200	4.43	33.83	199	26.84	124.4	3.63	3.26	1470.
225	4.25	33.85	223	26.87	121.2	3.93	3.92	1470.
250	4.19	33.88	248	26.90	118.5	4.23	4.65	1470.
300	4.08	33.95	298	26.97	112.3	4.81	6.27	1471.
400	3.88	34.04	397	27.06	104.6	5.89	10.11	1472.
500	3.70	34.13	496	27.15	96.7	6.90	14.73	1473.
600	3.53	34.18	595	27.21	91.7	7.85	20.04	1474.
800	3.17	34.30	793	27.34	80.6	9.57	32.28	1475.
1000	2.87	34.38	990	27.43	72.7	11.10	46.31	1478.
1200	2.61	34.44	1188	27.50	66.6	12.49	61.87	1480.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16
PRESSURE, DB
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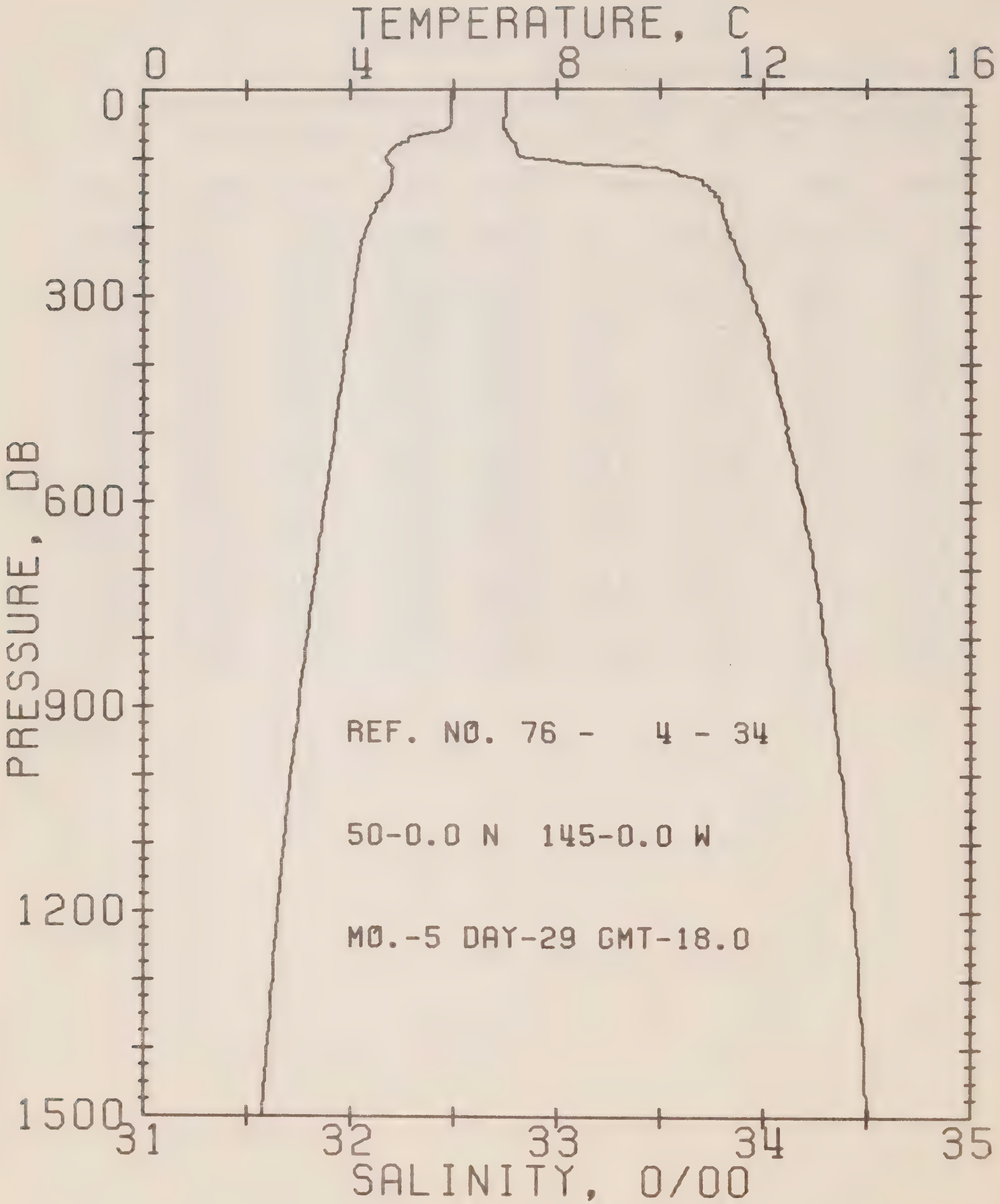
600
900
1200
1500
REF. NO. 76 - 4 - 33
50-0.0 N 145-0.0 W
MO.-5 DAY-28 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 33 DATE 28/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 380 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.99	32.77	0	25.82	218.9	0.0	0.0	1472.
10	5.97	32.76	10	25.81	219.8	0.22	0.01	1472.
20	5.96	32.76	20	25.81	219.7	0.44	0.04	1472.
30	5.96	32.77	30	25.82	219.1	0.66	0.10	1472.
50	5.94	32.76	50	25.82	219.8	1.10	0.28	1473.
75	5.28	32.81	75	25.93	209.0	1.63	0.62	1470.
100	4.84	32.93	99	26.08	195.3	2.14	1.08	1469.
125	4.84	33.55	124	26.57	149.0	2.58	1.57	1470.
150	4.78	33.75	149	26.73	133.6	2.92	2.06	1471.
175	4.60	33.81	174	26.80	127.4	3.25	2.59	1471.
200	4.39	33.84	199	26.85	123.2	3.56	3.19	1470.
225	4.26	33.87	223	26.88	120.0	3.87	3.85	1470.
250	4.15	33.90	248	26.92	116.6	4.16	4.57	1470.
300	4.05	33.95	298	26.97	112.3	4.73	6.17	1471.
400	3.90	34.04	397	27.06	104.5	5.81	10.01	1472.
500	3.71	34.12	496	27.14	97.4	6.81	14.60	1473.
600	3.51	34.20	595	27.22	90.6	7.75	19.86	1474.
800	3.15	34.31	793	27.35	79.6	9.45	31.92	1475.
1000	2.85	34.39	990	27.43	72.0	10.96	45.78	1478.
1200	2.60	34.45	1188	27.50	65.9	12.34	61.23	1480.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8
12
16
PRESSURE, DB
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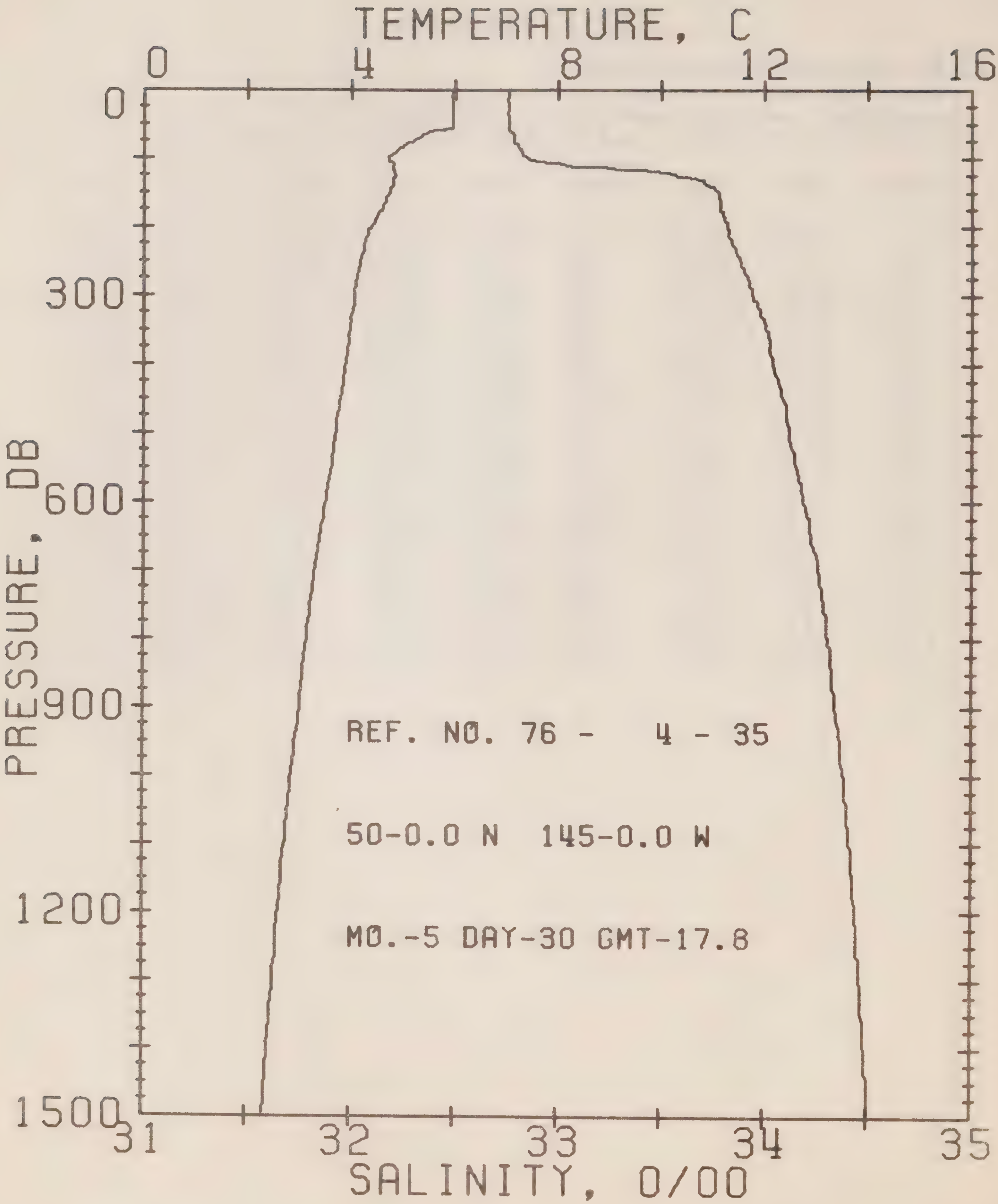
300
600
900
1200
1500
REF. NO. 76 - 4 - 34
50-0.0 N 145-0.0 W
MO.-5 DAY-29 GMT-18.0
31
32
33
34
35
SALINITY, O/OO

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 34 DATE 29/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 18.0
RESULTS OF STP CAST 364 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.95	32.75	0	25.81	219.9	0.0	0.0	1472.
10	5.95	32.75	10	25.81	220.2	0.22	0.01	1472.
20	5.95	32.75	20	25.81	220.3	0.44	0.04	1472.
30	5.95	32.75	30	25.81	220.4	0.66	0.10	1472.
50	5.95	32.74	50	25.80	221.4	1.10	0.28	1473.
75	5.11	32.79	75	25.94	208.5	1.64	0.62	1470.
100	4.69	32.85	99	26.03	199.7	2.15	1.08	1468.
125	4.81	33.60	124	26.61	144.9	2.57	1.56	1470.
150	4.73	33.76	149	26.75	132.0	2.92	2.04	1471.
175	4.48	33.80	174	26.81	126.8	3.24	2.57	1470.
200	4.31	33.82	199	26.84	123.5	3.55	3.17	1470.
225	4.21	33.86	223	26.88	120.0	3.85	3.83	1470.
250	4.14	33.89	248	26.92	116.9	4.15	4.54	1470.
300	4.06	33.94	298	26.97	112.8	4.73	6.15	1471.
400	3.88	34.04	397	27.06	104.4	5.81	10.00	1472.
500	3.69	34.11	496	27.14	98.1	6.81	14.62	1473.
600	3.50	34.19	595	27.22	90.9	7.76	19.90	1473.
800	3.16	34.30	793	27.33	80.8	9.47	32.08	1475.
1000	2.84	34.38	990	27.43	72.6	11.00	46.09	1477.
1200	2.59	34.44	1188	27.50	66.4	12.39	61.66	1480.



TEMPERATURE, C
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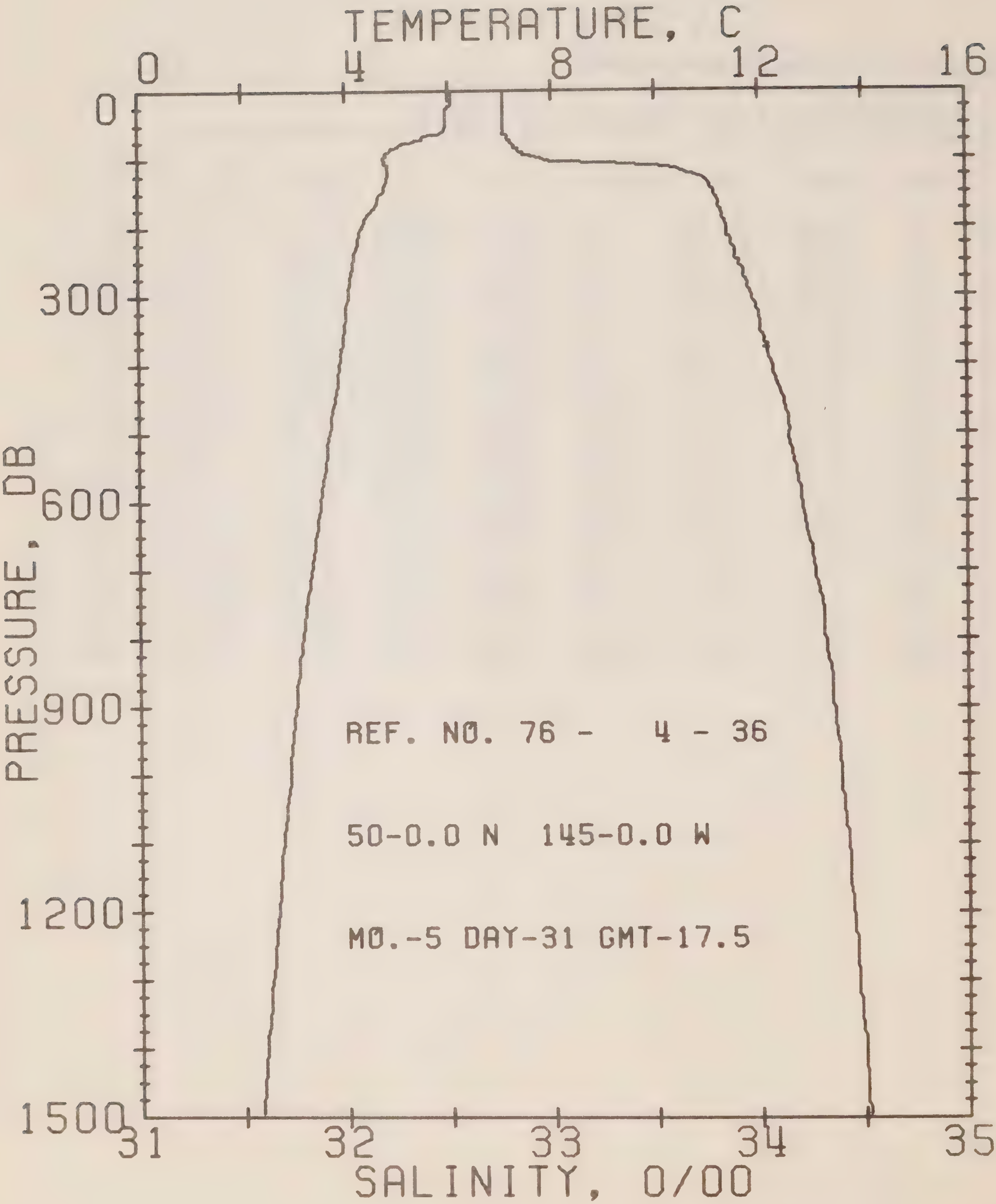
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 35
50-0.0 N 145-0.0 W
MO.-5 DAY-30 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 35 DATE 30/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 398 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	5.97	32.76	0	25.81	219.3	0.0	0.0	1472.
10	5.95	32.76	10	25.82	219.5	0.22	0.01	1472.
20	5.95	32.76	20	25.81	219.8	0.44	0.04	1472.
30	5.95	32.76	30	25.82	219.7	0.66	0.10	1472.
50	5.94	32.76	50	25.82	219.8	1.10	0.28	1473.
75	5.19	32.79	75	25.93	209.3	1.64	0.62	1470.
100	4.72	32.86	99	26.04	199.2	2.15	1.08	1469.
125	4.84	33.58	124	26.59	146.8	2.58	1.57	1470.
150	4.73	33.78	149	26.76	130.9	2.92	2.05	1471.
175	4.58	33.79	174	26.79	128.7	3.25	2.59	1471.
200	4.38	33.82	199	26.83	124.6	3.56	3.19	1470.
225	4.25	33.85	223	26.87	121.2	3.87	3.85	1470.
250	4.16	33.88	248	26.91	117.8	4.17	4.58	1470.
300	4.06	33.94	298	26.96	113.1	4.74	6.19	1471.
400	3.88	34.04	397	27.06	104.6	5.82	10.02	1472.
500	3.68	34.12	496	27.14	97.3	6.82	14.61	1473.
600	3.50	34.19	595	27.22	91.0	7.76	19.87	1473.
800	3.14	34.31	793	27.34	79.8	9.45	31.89	1475.
1000	2.84	34.39	990	27.43	72.0	10.97	45.80	1478.
1200	2.60	34.44	1188	27.50	66.5	12.35	61.31	1480.


TEMPERATURE, C
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12
16
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900
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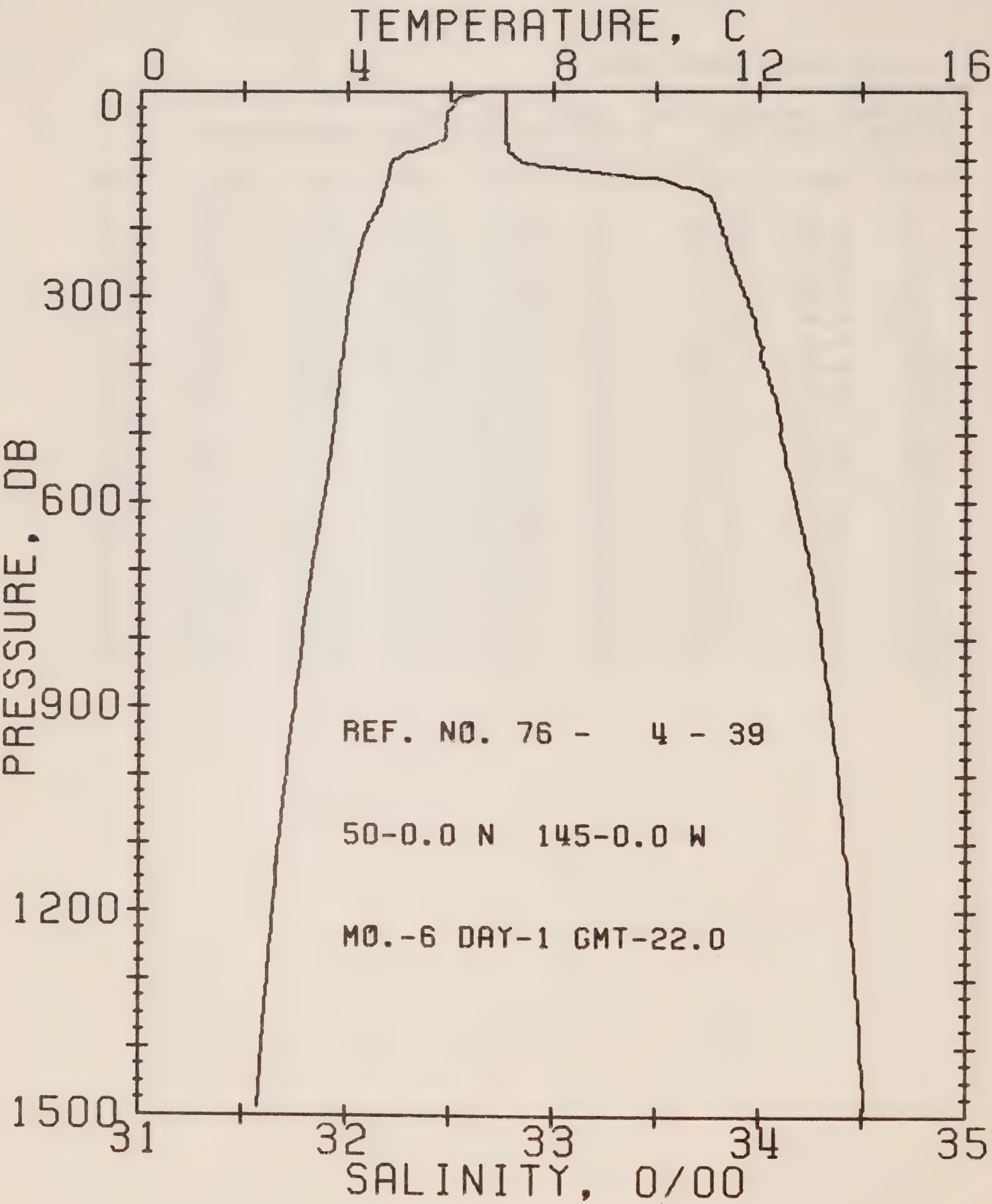
REF. NO. 76 - 4 - 36
50-0.0 N 145-0.0 W
MO.-5 DAY-31 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 36 DATE 31/ 5/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 377 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.04	32.77	0	25.81	219.4	0.0	0.0	1472.
10	6.04	32.77	10	25.81	219.8	0.22	0.01	1472.
20	6.04	32.77	20	25.81	219.9	0.44	0.04	1473.
30	5.95	32.77	30	25.82	219.0	0.66	0.10	1472.
50	5.94	32.77	50	25.82	219.0	1.10	0.28	1473.
75	5.29	32.80	75	25.93	209.7	1.64	0.62	1470.
100	4.74	32.96	99	26.11	192.0	2.14	1.07	1469.
125	4.81	33.71	124	26.70	136.7	2.54	1.52	1471.
150	4.70	33.79	149	26.78	129.8	2.87	1.99	1471.
175	4.50	33.82	174	26.82	125.7	3.19	2.51	1470.
200	4.31	33.85	199	26.86	121.6	3.50	3.11	1470.
225	4.22	33.87	223	26.89	119.3	3.80	3.76	1470.
250	4.14	33.91	248	26.93	115.7	4.09	4.47	1470.
300	4.04	33.96	298	26.98	111.1	4.66	6.06	1471.
400	3.87	34.06	397	27.08	102.8	5.73	9.36	1472.
500	3.67	34.14	496	27.16	95.3	6.71	14.38	1472.
600	3.49	34.20	595	27.23	89.8	7.64	19.56	1473.
800	3.14	34.31	793	27.35	79.1	9.32	31.51	1475.
1000	2.87	34.39	990	27.43	72.0	10.82	45.23	1478.
1200	2.64	34.44	1188	27.50	66.7	12.21	60.77	1480.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16
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900
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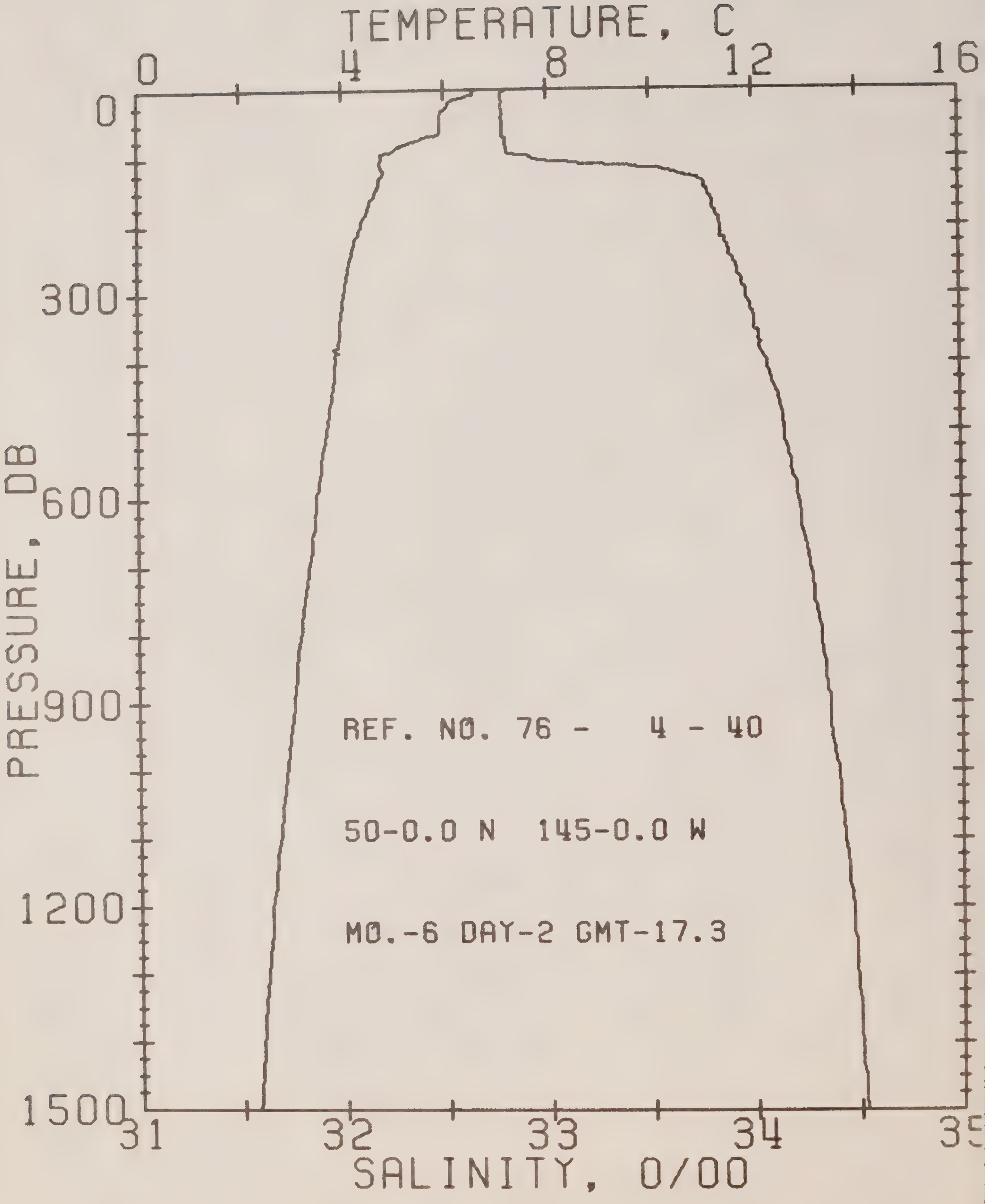
PRESSURE, DB
REF. NO. 76 - 4 - 39
50-0.0 N 145-0.0 W
MO.-6 DAY-1 GMT-22.0
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 39 DATE 1/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 22.0
RESULTS OF STP CAST 361 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.59	32.77	0	25.74	226.0	0.0	0.0	1474.
10	6.13	32.77	10	25.80	220.8	0.22	0.01	1473.
20	6.06	32.77	20	25.81	220.0	0.44	0.05	1473.
30	5.93	32.77	30	25.83	218.7	0.66	0.10	1472.
50	5.90	32.77	50	25.83	218.6	1.10	0.28	1473.
75	5.70	32.77	75	25.85	216.5	1.65	0.63	1472.
100	4.89	32.83	99	25.99	203.3	2.17	1.10	1469.
125	4.79	33.41	124	26.46	159.0	2.64	1.63	1470.
150	4.70	33.74	149	26.74	133.5	3.00	2.13	1471.
175	4.55	33.79	174	26.79	128.4	3.32	2.67	1470.
200	4.38	33.82	199	26.83	124.5	3.64	3.27	1470.
225	4.27	33.84	223	26.86	122.2	3.95	3.94	1470.
250	4.17	33.87	248	26.89	119.1	4.25	4.66	1470.
300	4.03	33.93	298	26.96	113.3	4.83	6.29	1470.
400	3.87	34.02	397	27.05	106.0	5.92	10.17	1472.
500	3.72	34.10	496	27.13	99.0	6.93	14.82	1473.
600	3.53	34.18	595	27.20	92.1	7.89	20.18	1474.
800	3.15	34.30	793	27.34	80.4	9.60	32.33	1475.
1000	2.84	34.38	990	27.43	72.1	11.12	46.25	1477.
1200	2.58	34.44	1188	27.50	66.0	12.49	61.67	1480.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1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 40
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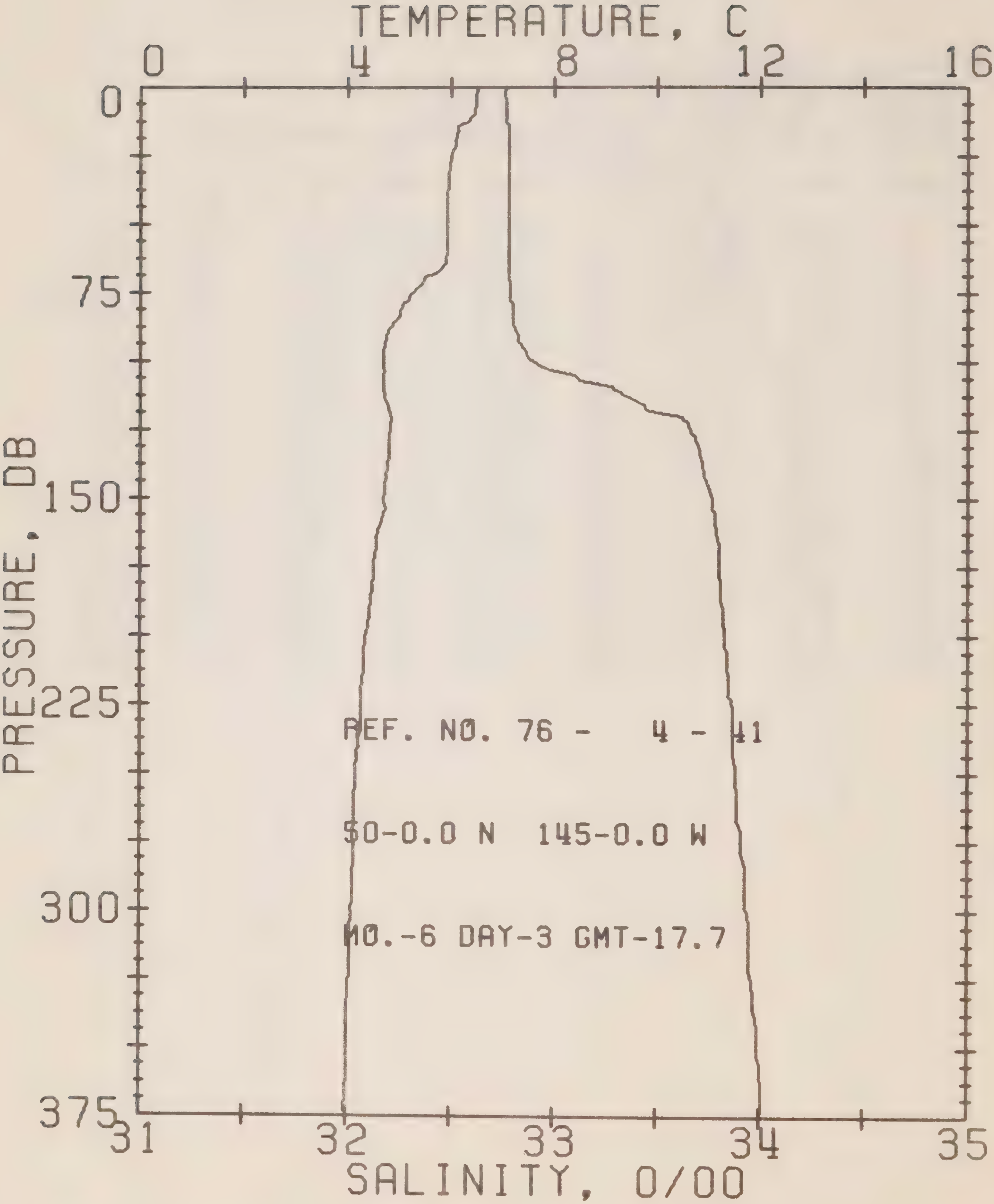
MO.-6 DAY-2 GMT-17.3
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 40 DATE 2/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.3
RESULTS OF STP CAST 371 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.59	32.80	0	25.77	223.8	0.0	0.0	1475.
10	6.44	32.78	10	25.77	223.8	0.22	0.01	1474.
20	6.10	32.79	20	25.82	219.1	0.45	0.05	1473.
30	6.01	32.79	30	25.83	218.2	0.66	0.10	1473.
50	5.92	32.79	50	25.84	217.3	1.10	0.28	1473.
75	5.45	32.80	75	25.91	211.4	1.64	0.62	1471.
100	4.78	32.92	99	26.08	195.3	2.15	1.08	1469.
125	4.81	33.65	124	26.65	141.2	2.57	1.55	1470.
150	4.65	33.78	149	26.77	130.0	2.90	2.02	1470.
175	4.51	33.81	174	26.81	126.4	3.22	2.55	1470.
200	4.36	33.84	199	26.85	122.6	3.53	3.14	1470.
225	4.24	33.87	223	26.89	119.5	3.84	3.80	1470.
250	4.14	33.91	248	26.93	115.7	4.13	4.51	1470.
300	4.03	33.97	298	26.99	110.5	4.70	6.10	1470.
400	3.86	34.07	397	27.09	102.1	5.76	9.90	1472.
500	3.68	34.15	496	27.17	95.0	6.75	14.41	1473.
600	3.47	34.21	595	27.24	88.9	7.67	19.56	1473.
800	3.16	34.32	793	27.35	79.0	9.35	31.50	1475.
1000	2.86	34.40	990	27.44	71.2	10.85	45.30	1478.
1200	2.58	34.47	1188	27.52	64.1	12.21	60.50	1480.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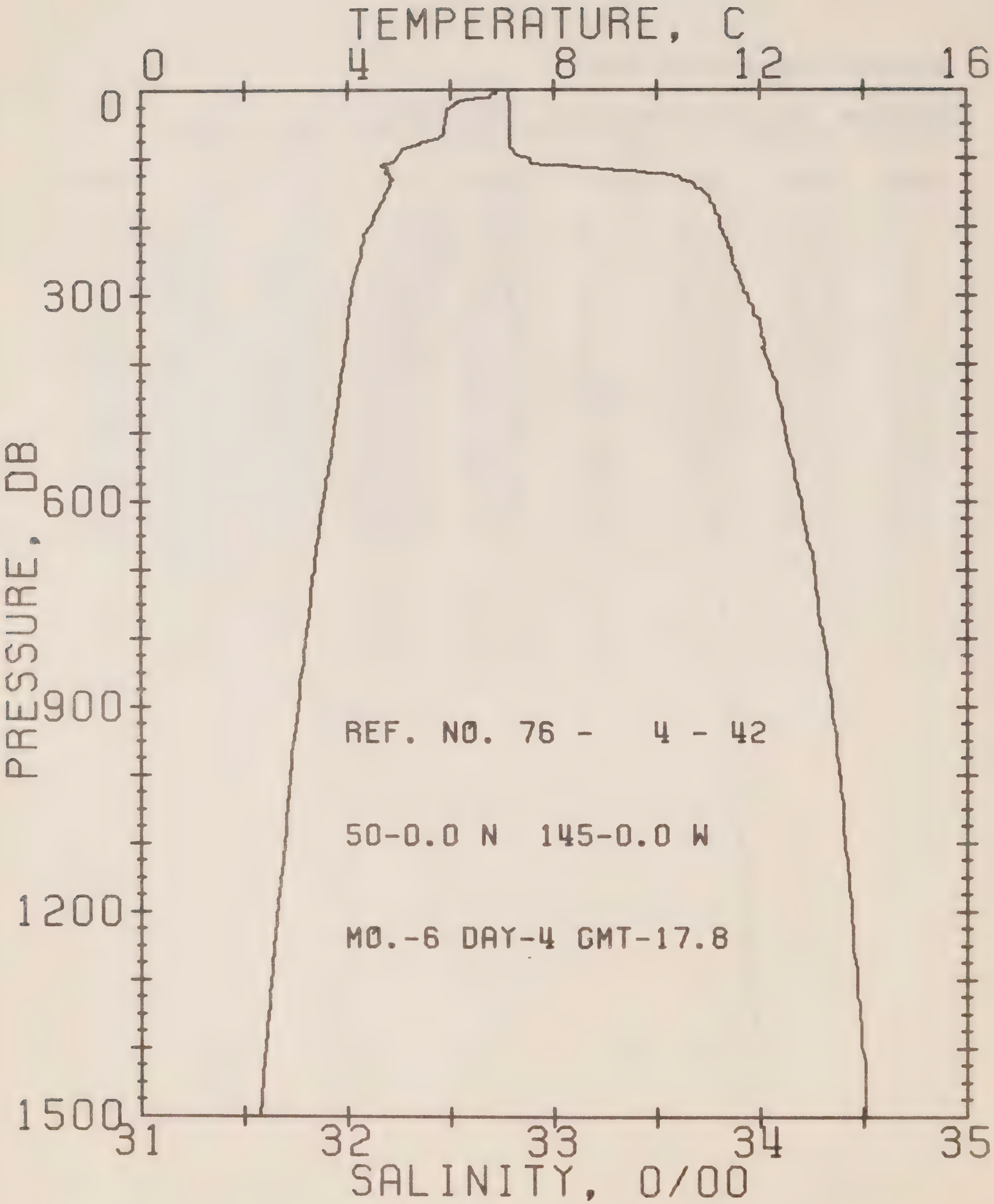
300
375
PRESSURE, DB
REF. NO. 76 - 4 - 41
50-0.0 N 145-0.0 W
MO.-6 DAY-3 GMT-17.7
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 41 DATE 3/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.7
RESULTS OF STP CAST 205 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.51	32.77	0	25.75	225.0	0.0	0.0	1474.
10	6.43	32.77	10	25.76	224.5	0.23	0.01	1474.
20	6.08	32.78	20	25.82	219.6	0.45	0.05	1473.
30	5.96	32.78	30	25.83	218.3	0.67	0.10	1472.
50	5.93	32.78	50	25.83	218.1	1.10	0.28	1473.
75	5.25	32.79	75	25.92	210.0	1.64	0.62	1470.
100	4.70	32.90	99	26.07	196.0	2.15	1.08	1469.
125	4.83	33.66	124	26.66	140.7	2.56	1.55	1471.
150	4.70	33.77	149	26.76	131.2	2.90	2.02	1471.
175	4.51	33.80	174	26.80	127.2	3.22	2.55	1470.
200	4.35	33.83	199	26.84	123.5	3.54	3.15	1470.
225	4.27	33.86	223	26.88	120.4	3.84	3.81	1470.
250	4.16	33.88	248	26.90	118.3	4.14	4.54	1470.
300	4.08	33.93	298	26.96	113.7	4.72	6.16	1471.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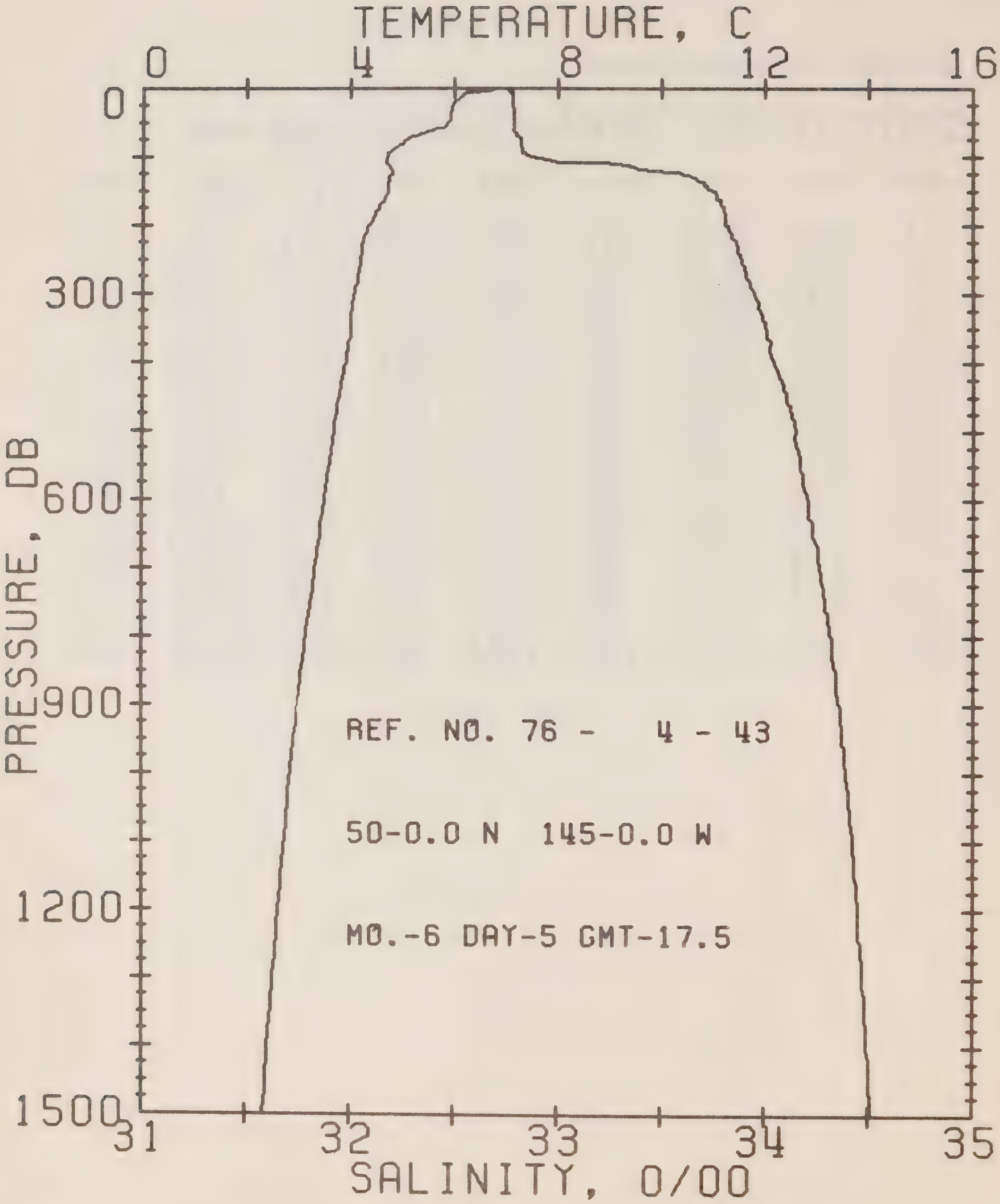
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 42
50-0.0 N 145-0.0 W
MO.-6 DAY-4 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 42 DATE 4/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 312 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.85	32.79	0	25.72	227.9	0.0	0.0	1476.
10	6.77	32.78	10	25.73	227.8	0.23	0.01	1475.
20	6.12	32.79	20	25.82	219.3	0.45	0.05	1473.
30	5.93	32.79	30	25.84	217.3	0.67	0.10	1472.
50	5.89	32.79	50	25.85	216.9	1.10	0.23	1473.
75	5.49	32.79	75	25.89	212.6	1.65	0.62	1471.
100	4.95	32.88	99	26.03	200.2	2.16	1.09	1470.
125	4.82	33.58	124	26.60	146.5	2.61	1.60	1470.
150	4.76	33.73	149	26.72	134.7	2.96	2.09	1471.
175	4.59	33.78	174	26.78	129.6	3.29	2.63	1471.
200	4.43	33.81	199	26.82	125.8	3.61	3.24	1470.
225	4.29	33.85	223	26.86	121.8	3.92	3.91	1470.
250	4.23	33.87	248	26.89	119.7	4.22	4.64	1470.
300	4.07	33.94	298	26.96	113.1	4.80	6.27	1471.
400	3.91	34.04	397	27.06	104.8	5.89	10.13	1472.
500	3.72	34.12	496	27.14	97.6	6.89	14.74	1473.
600	3.52	34.20	595	27.22	90.3	7.84	20.01	1474.
800	3.18	34.31	793	27.34	80.1	9.54	32.13	1476.
1000	2.89	34.38	990	27.43	72.7	11.06	46.10	1478.
1200	2.63	34.44	1188	27.50	66.8	12.46	61.74	1480.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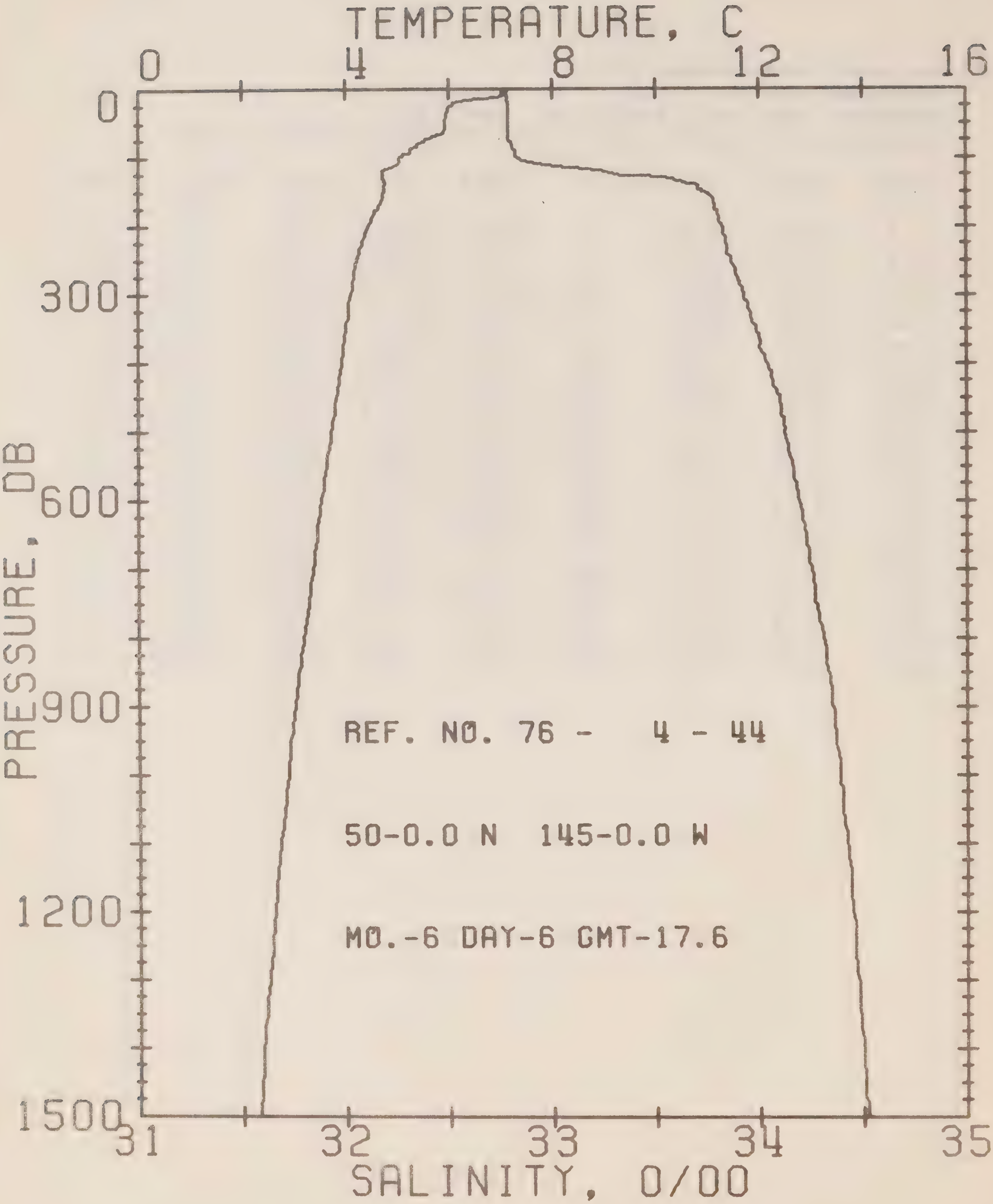
MO.-6 DAY-5 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 43 DATE 5/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 349 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	6.75	32.76	0	25.71	228.8	0.0	0.0	1475.
10	6.18	32.78	10	25.80	220.7	0.23	0.01	1473.
20	6.02	32.78	20	25.82	218.9	0.45	0.04	1473.
30	5.95	32.78	30	25.84	217.9	0.66	0.10	1472.
50	5.88	32.79	50	25.85	216.9	1.10	0.28	1473.
75	5.07	32.82	75	25.97	205.7	1.63	0.62	1470.
100	4.70	32.87	99	26.05	198.3	2.14	1.07	1469.
125	4.82	33.61	124	26.62	144.3	2.56	1.55	1470.
150	4.71	33.75	149	26.74	132.8	2.91	2.03	1471.
175	4.54	33.80	174	26.80	127.6	3.23	2.57	1470.
200	4.36	33.81	199	26.83	125.1	3.55	3.17	1470.
225	4.23	33.86	223	26.88	120.2	3.85	3.84	1470.
250	4.18	33.89	248	26.91	117.9	4.15	4.56	1470.
300	4.06	33.95	298	26.97	112.5	4.73	6.18	1471.
400	3.90	34.04	397	27.06	104.8	5.81	10.04	1472.
500	3.67	34.15	496	27.17	95.0	6.81	14.59	1472.
600	3.49	34.20	595	27.23	89.8	7.73	19.79	1473.
800	3.14	34.31	793	27.35	79.2	9.42	31.81	1475.
1000	2.84	34.39	990	27.44	71.7	10.93	45.61	1478.
1200	2.61	34.45	1188	27.51	65.9	12.31	61.05	1480.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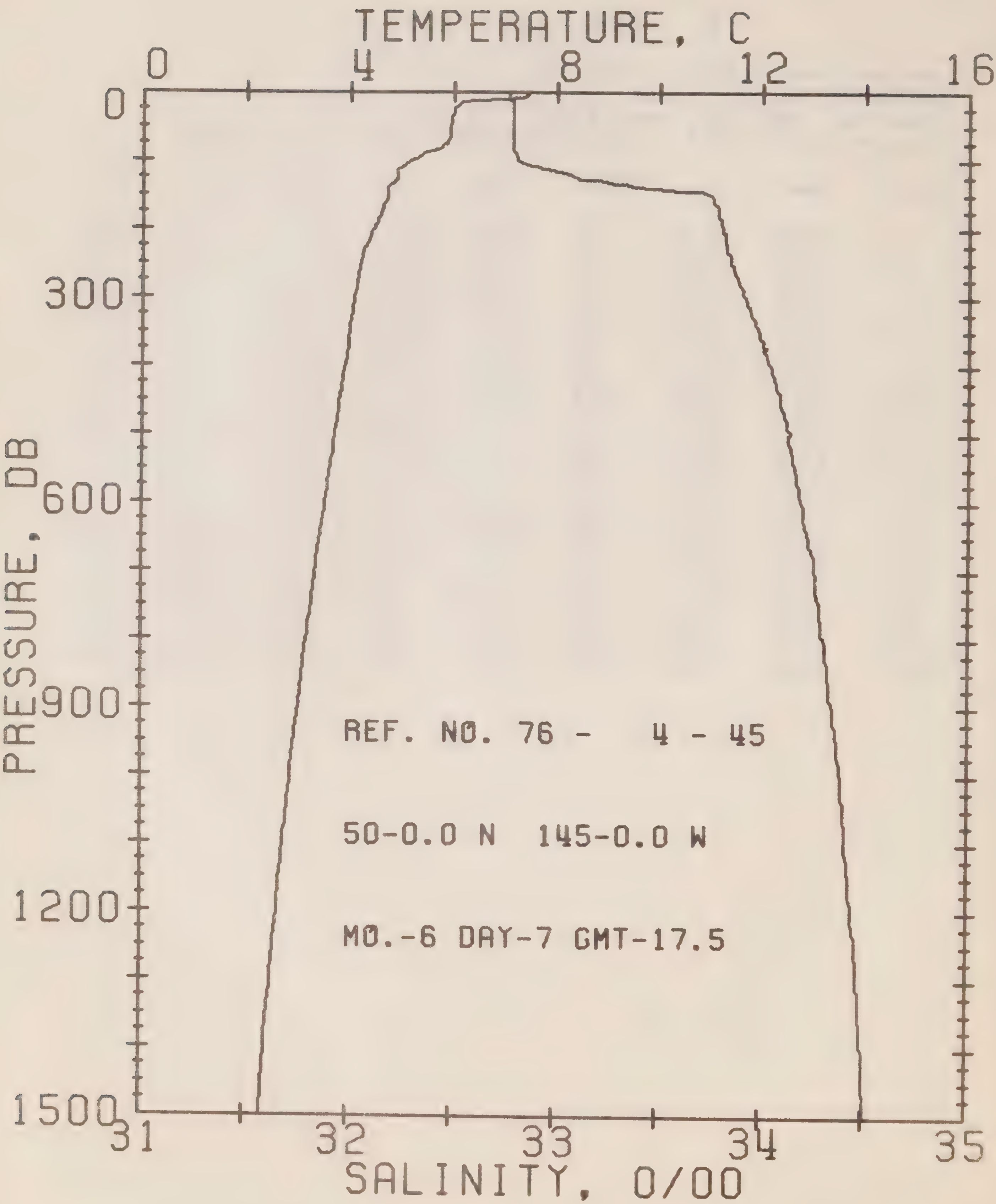
50-0.0 N 145-0.0 W
MO.-6 DAY-6 GMT-17.6
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 44 DATE 6/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.6
RESULTS OF STP CAST 386 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.03	32.78	0	25.69	230.8	0.0	0.0	1476.
10	7.01	32.78	10	25.70	230.9	0.23	0.01	1476.
20	6.12	32.79	20	25.82	219.3	0.46	0.05	1473.
30	5.97	32.79	30	25.84	217.7	0.68	0.10	1473.
50	5.91	32.79	50	25.84	217.2	1.11	0.28	1473.
75	5.53	32.80	75	25.90	212.3	1.65	0.62	1471.
100	5.05	32.84	99	25.98	204.3	2.17	1.09	1470.
125	4.72	33.34	124	26.42	163.5	2.64	1.62	1470.
150	4.74	33.73	149	26.72	134.6	2.99	2.12	1471.
175	4.61	33.79	174	26.78	129.1	3.32	2.66	1471.
200	4.44	33.82	199	26.83	125.2	3.64	3.26	1470.
225	4.31	33.84	223	26.86	122.5	3.95	3.93	1470.
250	4.21	33.87	248	26.89	119.5	4.25	4.66	1470.
300	4.09	33.93	298	26.95	114.2	4.83	6.30	1471.
400	3.92	34.04	397	27.06	105.0	5.93	10.21	1472.
500	3.72	34.13	496	27.14	97.2	6.93	14.81	1473.
600	3.51	34.19	595	27.22	90.8	7.87	20.07	1474.
800	3.17	34.31	793	27.34	79.9	9.58	32.23	1475.
1000	2.87	34.39	990	27.43	72.0	11.10	46.08	1478.
1200	2.61	34.45	1188	27.51	65.9	12.47	61.47	1480.



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600
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1500
PRESSURE, DB
REF. NO. 76 - 4 - 45
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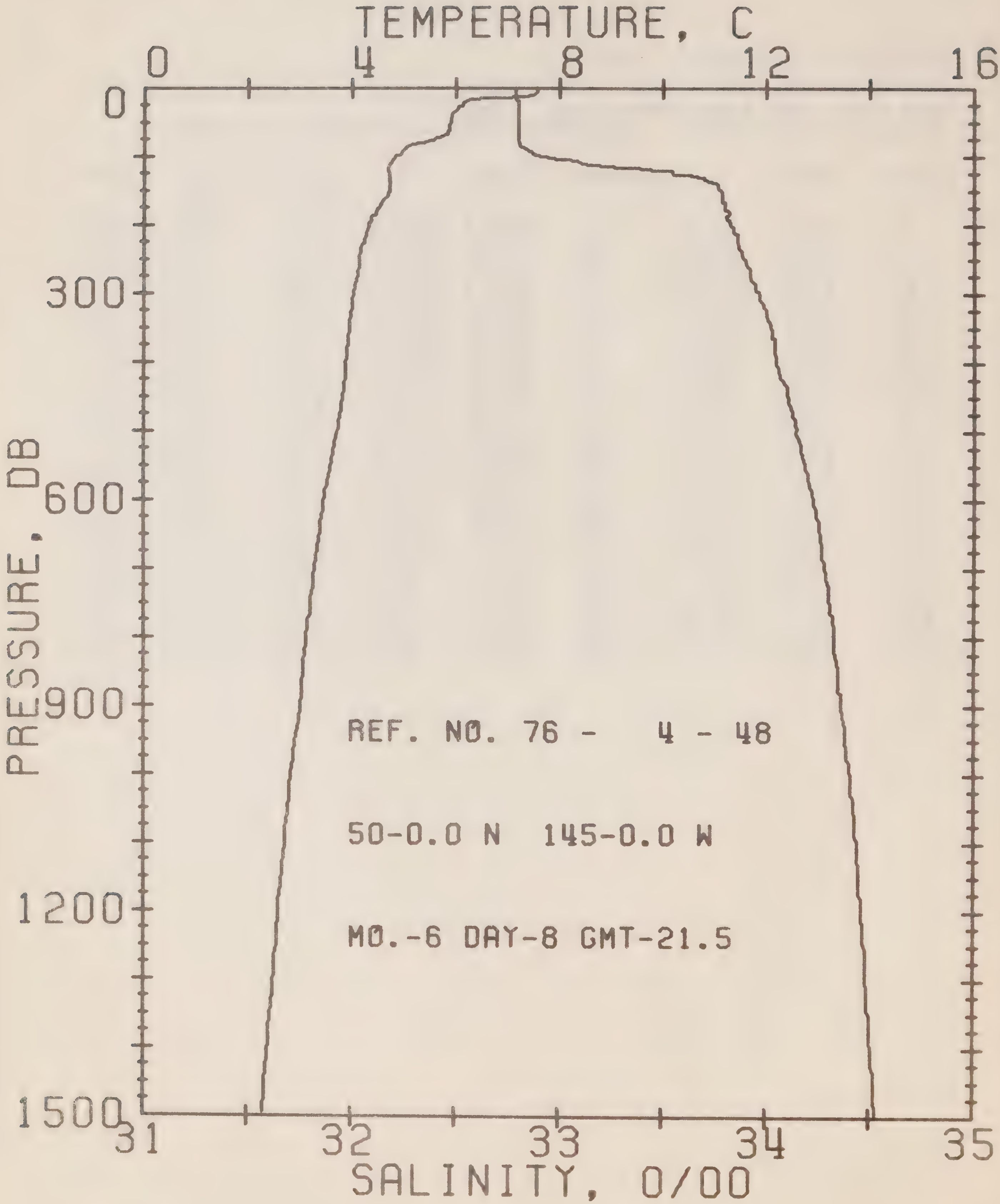
MO.-6 DAY-7 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 45 DATE 7/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 399 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL.	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.44	32.77	0	25.63	236.9	0.0	0.0	1478.
10	7.00	32.77	10	25.69	231.6	0.24	0.01	1476.
20	6.08	32.79	20	25.82	219.0	0.46	0.05	1473.
30	5.99	32.79	30	25.83	218.0	0.68	0.10	1473.
50	5.93	32.79	50	25.84	217.5	1.11	0.28	1473.
75	5.86	32.79	75	25.85	216.9	1.66	0.63	1473.
100	5.22	32.81	99	25.94	208.5	2.19	1.10	1471.
125	4.92	33.10	124	26.20	183.6	2.68	1.66	1470.
150	4.72	33.74	149	26.74	133.4	3.07	2.21	1471.
175	4.60	33.79	174	26.79	128.9	3.40	2.75	1471.
200	4.46	33.81	199	26.82	126.2	3.72	3.36	1470.
225	4.31	33.83	223	26.85	123.3	4.03	4.04	1470.
250	4.21	33.85	248	26.88	121.0	4.34	4.78	1470.
300	4.09	33.92	298	26.94	114.9	4.93	6.43	1471.
400	3.90	34.04	397	27.06	104.5	6.02	10.33	1472.
500	3.70	34.13	496	27.15	96.5	7.03	14.94	1473.
600	3.52	34.19	595	27.22	91.0	7.97	20.20	1474.
800	3.17	34.30	793	27.34	80.6	9.68	32.38	1475.
1000	2.88	34.38	990	27.43	72.5	11.21	46.39	1478.
1200	2.63	34.44	1188	27.50	66.8	12.60	61.98	1480.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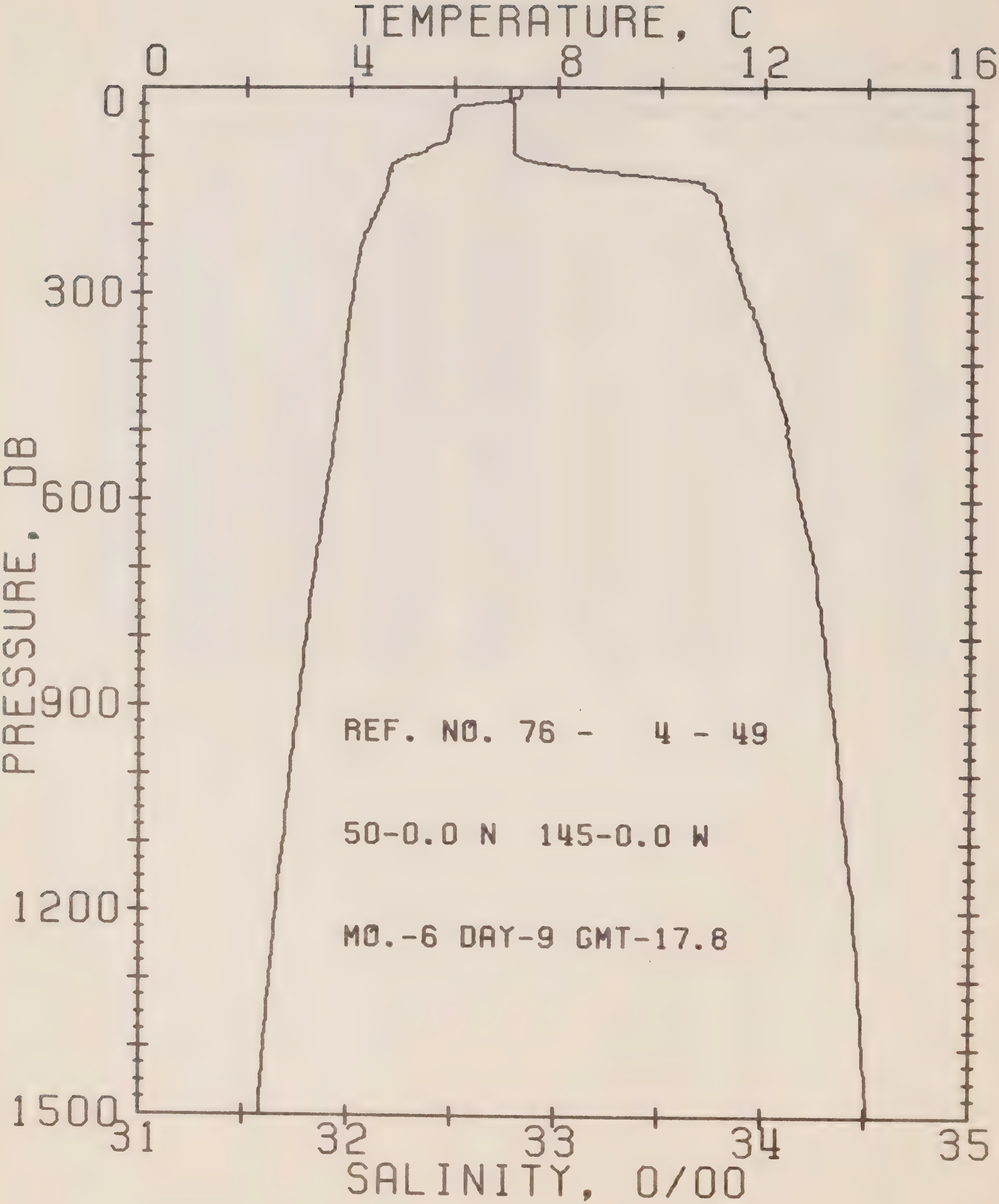
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 48
50-0.0 N 145-0.0 W
MO.-6 DAY-8 GMT-21.5
31
32
33
34
35
SALINITY, 0/00

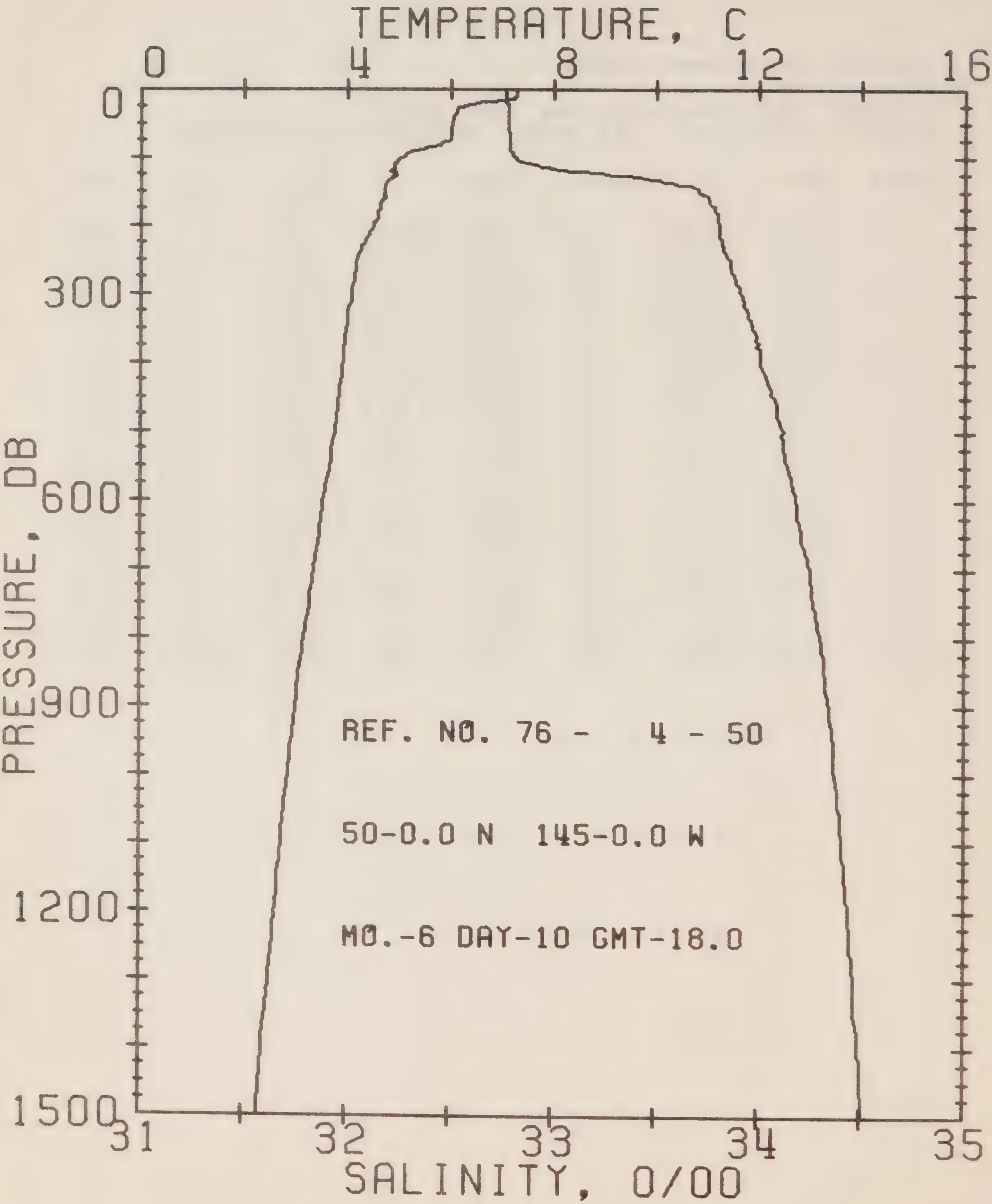
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 48 DATE 8/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 21.5
RESULTS OF STP CAST 385 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.58	32.79	0	25.62	237.3	0.0	0.0	1478.
10	7.50	32.79	10	25.64	236.6	0.24	0.01	1478.
20	6.18	32.80	20	25.82	219.3	0.46	0.05	1473.
30	6.02	32.80	30	25.84	217.5	0.68	0.10	1473.
50	5.89	32.80	50	25.85	216.2	1.12	0.28	1473.
75	5.58	32.80	75	25.89	213.0	1.65	0.62	1472.
100	4.83	32.92	99	26.07	195.9	2.17	1.08	1469.
125	4.71	33.56	124	26.59	146.9	2.60	1.57	1470.
150	4.72	33.78	149	26.76	130.7	2.93	2.04	1471.
175	4.52	33.80	174	26.80	127.3	3.26	2.57	1470.
200	4.32	33.83	199	26.85	123.1	3.57	3.17	1470.
225	4.23	33.86	223	26.88	120.2	3.87	3.83	1470.
250	4.14	33.89	248	26.92	117.0	4.17	4.54	1470.
300	4.02	33.97	298	26.99	110.4	4.74	6.14	1470.
400	3.87	34.05	397	27.07	103.7	5.80	9.94	1472.
500	3.71	34.15	496	27.16	95.6	6.80	14.49	1473.
600	3.45	34.23	595	27.25	87.6	7.71	19.62	1473.
800	3.13	34.33	793	27.36	78.0	9.36	31.35	1475.
1000	2.82	34.41	990	27.46	70.0	10.85	45.01	1477.
1200	2.59	34.46	1188	27.52	64.9	12.20	60.12	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 49
50-0.0 N 145-0.0 W
MO.-6 DAY-9 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

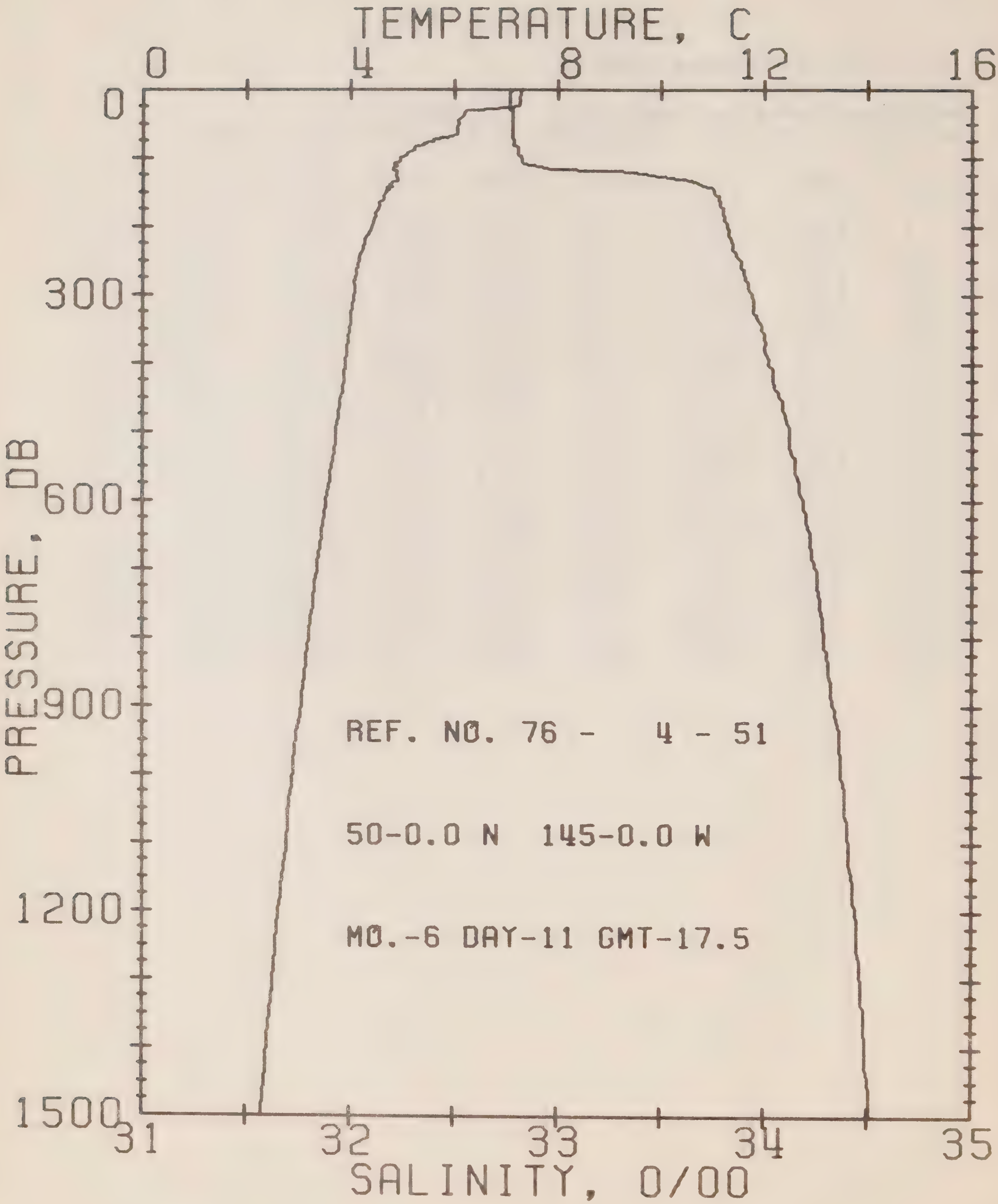
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 49 DATE 9/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 350 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.28	32.77	0	25.65	234.8	0.0	0.0	1477.
10	7.27	32.77	10	25.65	235.0	0.24	0.01	1477.
20	7.07	32.77	20	25.68	232.6	0.47	0.05	1477.
30	6.05	32.79	30	25.83	218.6	0.69	0.10	1473.
50	5.91	32.79	50	25.84	217.2	1.13	0.28	1473.
75	5.85	32.79	75	25.85	216.8	1.67	0.63	1473.
100	5.16	32.80	99	25.94	208.5	2.20	1.10	1470.
125	4.76	33.30	124	26.38	166.9	2.68	1.65	1470.
150	4.69	33.73	149	26.73	134.2	3.04	2.15	1470.
175	4.53	33.79	174	26.79	128.1	3.36	2.69	1470.
200	4.37	33.81	199	26.83	125.2	3.68	3.29	1470.
225	4.24	33.83	223	26.86	122.6	3.99	3.96	1470.
250	4.16	33.85	248	26.88	120.4	4.29	4.70	1470.
300	4.05	33.91	298	26.94	115.5	4.88	6.35	1471.
400	3.89	34.02	397	27.04	106.3	5.99	10.27	1472.
500	3.72	34.11	496	27.14	98.1	7.00	14.93	1473.
600	3.54	34.18	595	27.20	92.4	7.96	20.28	1474.
800	3.19	34.30	793	27.33	81.0	9.68	32.53	1476.
1000	2.89	34.37	990	27.42	73.7	11.23	46.68	1478.
1200	2.62	34.44	1188	27.50	66.7	12.63	62.37	1480.


TEMPERATURE, C
0
4
8
12
16
PRESSURE, DB
0
300
600
900
1200
1500
REF. NO. 76 - 4 - 50
50-0.0 N 145-0.0 W
MO.-6 DAY-10 GMT-18.0
31
32
33
34
35
SALINITY, 0/00

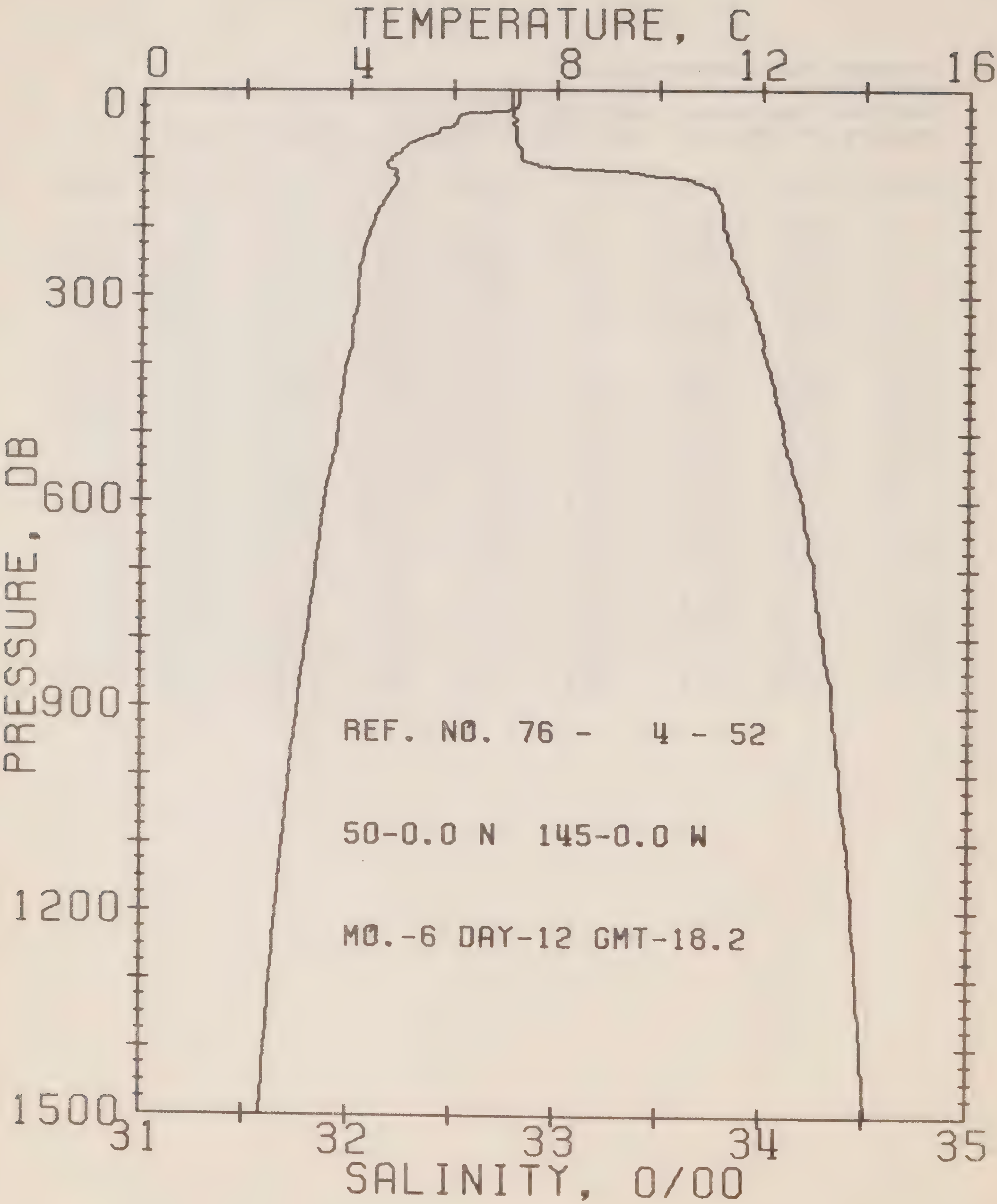
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 50 DATE 10/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 18.0
RESULTS OF STP CAST 370 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.27	32.77	0	25.65	234.7	0.0	0.0	1477.
10	7.27	32.77	10	25.65	235.0	0.23	0.01	1477.
20	6.57	32.77	20	25.74	226.3	0.47	0.05	1475.
30	6.11	32.78	30	25.81	220.2	0.69	0.10	1473.
50	6.03	32.78	50	25.82	219.4	1.13	0.28	1473.
75	5.95	32.79	75	25.84	217.9	1.68	0.63	1473.
100	5.08	32.81	99	25.96	206.8	2.21	1.10	1470.
125	4.92	33.28	124	26.35	170.1	2.69	1.66	1470.
150	4.71	33.71	149	26.71	135.8	3.06	2.17	1471.
175	4.63	33.79	174	26.78	129.3	3.39	2.72	1471.
200	4.50	33.81	199	26.81	126.5	3.71	3.33	1471.
225	4.32	33.82	223	26.84	124.2	4.02	4.01	1470.
250	4.17	33.86	248	26.89	119.9	4.33	4.75	1470.
300	4.08	33.91	298	26.94	115.3	4.92	6.40	1471.
400	3.90	34.01	397	27.03	107.1	6.02	10.33	1472.
500	3.75	34.12	496	27.14	98.0	7.05	15.02	1473.
600	3.53	34.18	595	27.21	92.0	8.00	20.37	1474.
800	3.18	34.30	793	27.34	80.6	9.73	32.64	1476.
1000	2.86	34.37	990	27.42	73.2	11.25	46.62	1478.
1200	2.62	34.44	1188	27.50	66.7	12.65	62.25	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 51
50-0.0 N 145-0.0 W
MO.-6 DAY-11 GMT-17.5
31
32
33
34
35
SALINITY, 0/00

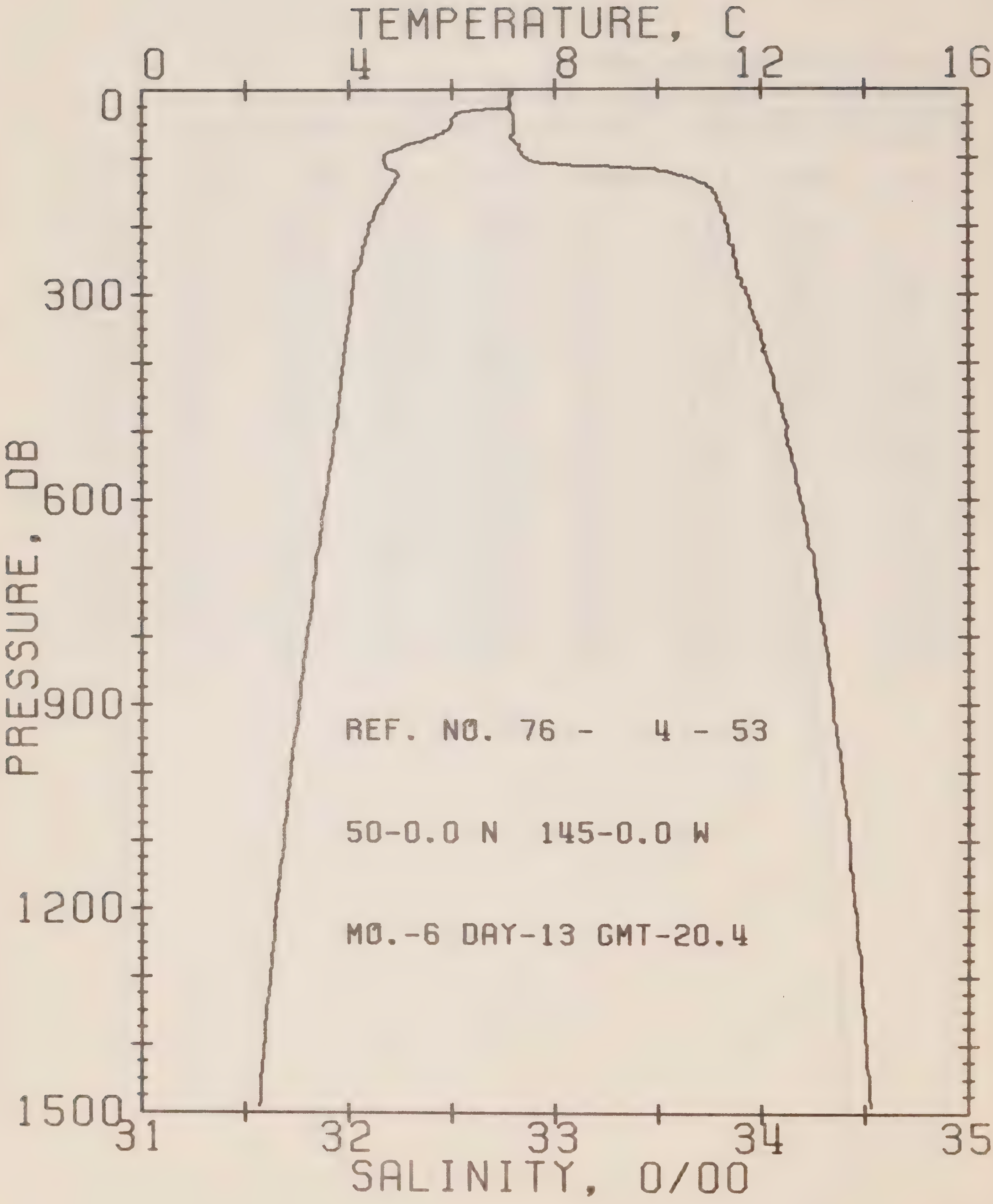
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 51 DATE 11/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.5
RESULTS OF STP CAST 351 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.32	32.78	0	25.65	234.6	0.0	0.0	1477.
10	7.26	32.77	10	25.65	235.0	0.23	0.01	1477.
20	7.26	32.77	20	25.65	235.1	0.47	0.05	1477.
30	6.53	32.77	30	25.75	225.9	0.70	0.11	1475.
50	6.07	32.78	50	25.82	219.8	1.14	0.29	1473.
75	5.57	32.79	75	25.88	213.5	1.69	0.63	1472.
100	4.97	32.82	99	25.98	204.9	2.21	1.10	1470.
125	4.89	33.49	124	26.52	154.0	2.68	1.64	1471.
150	4.68	33.76	149	26.75	131.7	3.03	2.13	1470.
175	4.52	33.80	174	26.80	127.3	3.36	2.66	1470.
200	4.39	33.82	199	26.83	124.7	3.67	3.26	1470.
225	4.26	33.85	223	26.87	121.4	3.98	3.93	1470.
250	4.15	33.88	248	26.91	117.8	4.28	4.66	1470.
300	4.06	33.94	298	26.96	113.0	4.86	6.28	1471.
400	3.89	34.02	397	27.04	106.2	5.95	10.17	1472.
500	3.71	34.12	496	27.14	97.5	6.97	14.83	1473.
600	3.52	34.19	595	27.21	91.2	7.92	20.15	1474.
800	3.19	34.29	793	27.33	81.6	9.64	32.42	1476.
1000	2.89	34.37	990	27.42	73.6	11.19	46.59	1478.
1200	2.61	34.44	1188	27.50	66.6	12.59	62.30	1480.
1500	2.29	34.51	1483	27.58	59.4	14.48	88.19	1484.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 52
50-0.0 N 145-0.0 W
MO.-6 DAY-12 GMT-18.2
31
32
33
34
35
SALINITY, 0/00

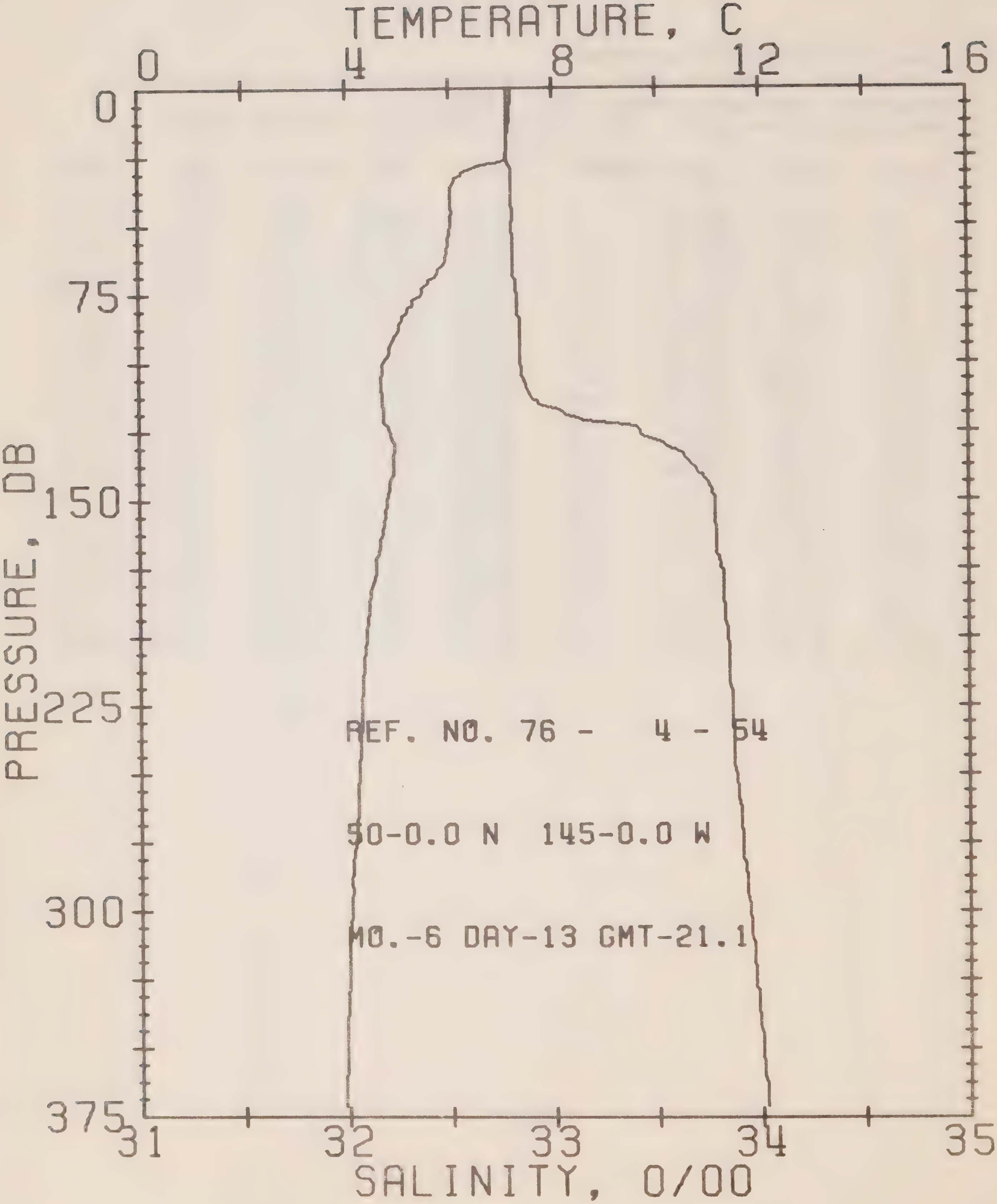
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 52 DATE 12/ 6/76
POSITION 50- 0.0N. 145- 0.0W GMT 18.2
RESULTS OF STP CAST 337 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.25	32.78	0	25.66	233.7	0.0	0.0	1477.
10	7.25	32.78	10	25.66	234.0	0.23	0.01	1477.
20	7.24	32.78	20	25.66	234.1	0.47	0.05	1477.
30	7.03	32.79	30	25.70	230.7	0.70	0.11	1477.
50	6.02	32.79	50	25.83	218.5	1.14	0.29	1473.
75	5.25	32.80	75	25.93	209.2	1.68	0.63	1470.
100	4.81	32.83	99	26.00	202.5	2.19	1.09	1469.
125	4.85	33.52	124	26.54	151.4	2.66	1.61	1470.
150	4.76	33.77	149	26.75	131.9	3.00	2.10	1471.
175	4.54	33.80	174	26.80	127.5	3.33	2.63	1470.
200	4.42	33.81	199	26.82	125.7	3.64	3.24	1470.
225	4.30	33.84	223	26.86	122.4	3.95	3.91	1470.
250	4.23	33.86	248	26.88	120.2	4.25	4.64	1470.
300	4.16	33.93	298	26.94	114.9	4.84	6.28	1471.
400	3.95	34.02	397	27.04	106.8	5.94	10.21	1472.
500	3.77	34.10	496	27.12	99.6	6.97	14.90	1473.
600	3.52	34.19	595	27.22	90.7	7.92	20.25	1474.
800	3.19	34.30	793	27.33	80.8	9.64	32.48	1476.
1000	2.86	34.38	990	27.43	72.7	11.17	46.51	1478.
1200	2.61	34.44	1188	27.50	66.6	12.56	62.08	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 53
50-0.0 N 145-0.0 W
MO.-6 DAY-13 GMT-20.4
31
32
33
34
35
SALINITY, 0/00

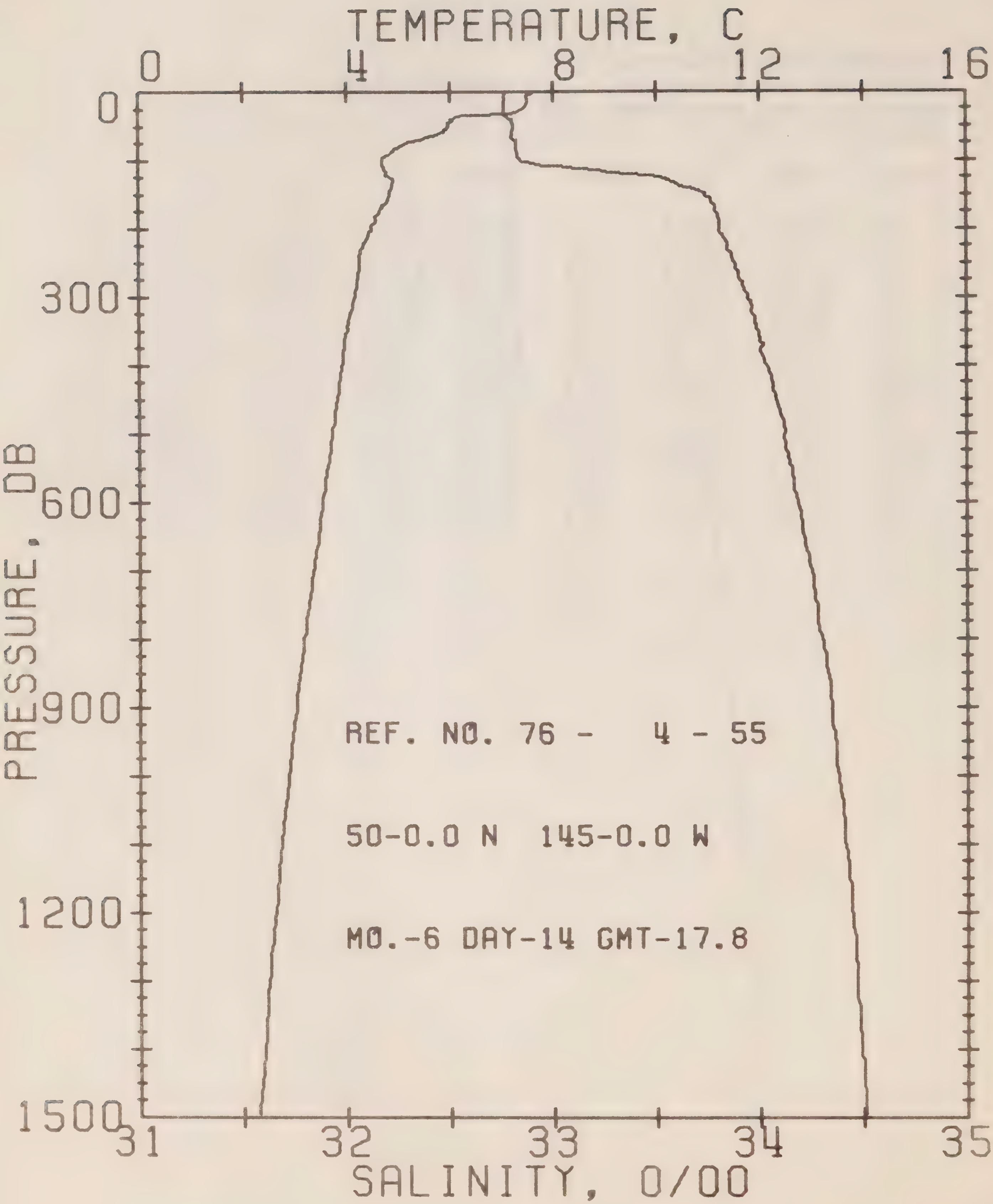
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 53 DATE 13/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 20.4
RESULTS OF STP CAST 370 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.18	32.79	0	25.68	232.0	0.0	0.0	1477.
10	7.13	32.78	10	25.68	232.5	0.23	0.01	1477.
20	7.14	32.78	20	25.68	232.8	0.46	0.05	1477.
30	6.60	32.78	30	25.75	226.0	0.70	0.11	1475.
50	5.99	32.80	50	25.84	217.4	1.13	0.28	1473.
75	5.42	32.80	75	25.91	211.1	1.67	0.63	1471.
100	4.67	32.86	99	26.04	198.8	2.18	1.08	1468.
125	4.95	33.60	124	26.60	146.5	2.62	1.58	1471.
150	4.76	33.77	149	26.75	131.9	2.96	2.06	1471.
175	4.52	33.81	174	26.81	126.6	3.29	2.60	1470.
200	4.38	33.84	199	26.85	123.1	3.60	3.19	1470.
225	4.30	33.85	223	26.87	121.7	3.90	3.86	1470.
250	4.23	33.88	248	26.90	118.9	4.20	4.58	1470.
300	4.05	33.93	298	26.96	113.7	4.79	6.21	1471.
400	3.89	34.03	397	27.05	105.1	5.88	10.10	1472.
500	3.72	34.12	496	27.14	97.7	6.89	14.73	1473.
600	3.53	34.19	595	27.21	91.3	7.83	20.02	1474.
800	3.18	34.31	793	27.34	80.4	9.55	32.19	1476.
1000	2.87	34.39	990	27.44	72.0	11.07	46.16	1478.
1200	2.59	34.45	1188	27.51	65.4	12.44	61.54	1480.


TEMPERATURE, C
0
4
8
12
16
0
75
150
225
300
375
PRESSURE, DB
REF. NO. 76 - 4 - 54
50-0.0 N 145-0.0 W
MO.-6 DAY-13 GMT-21.1
31
32
33
34
35
SALINITY, 0/00

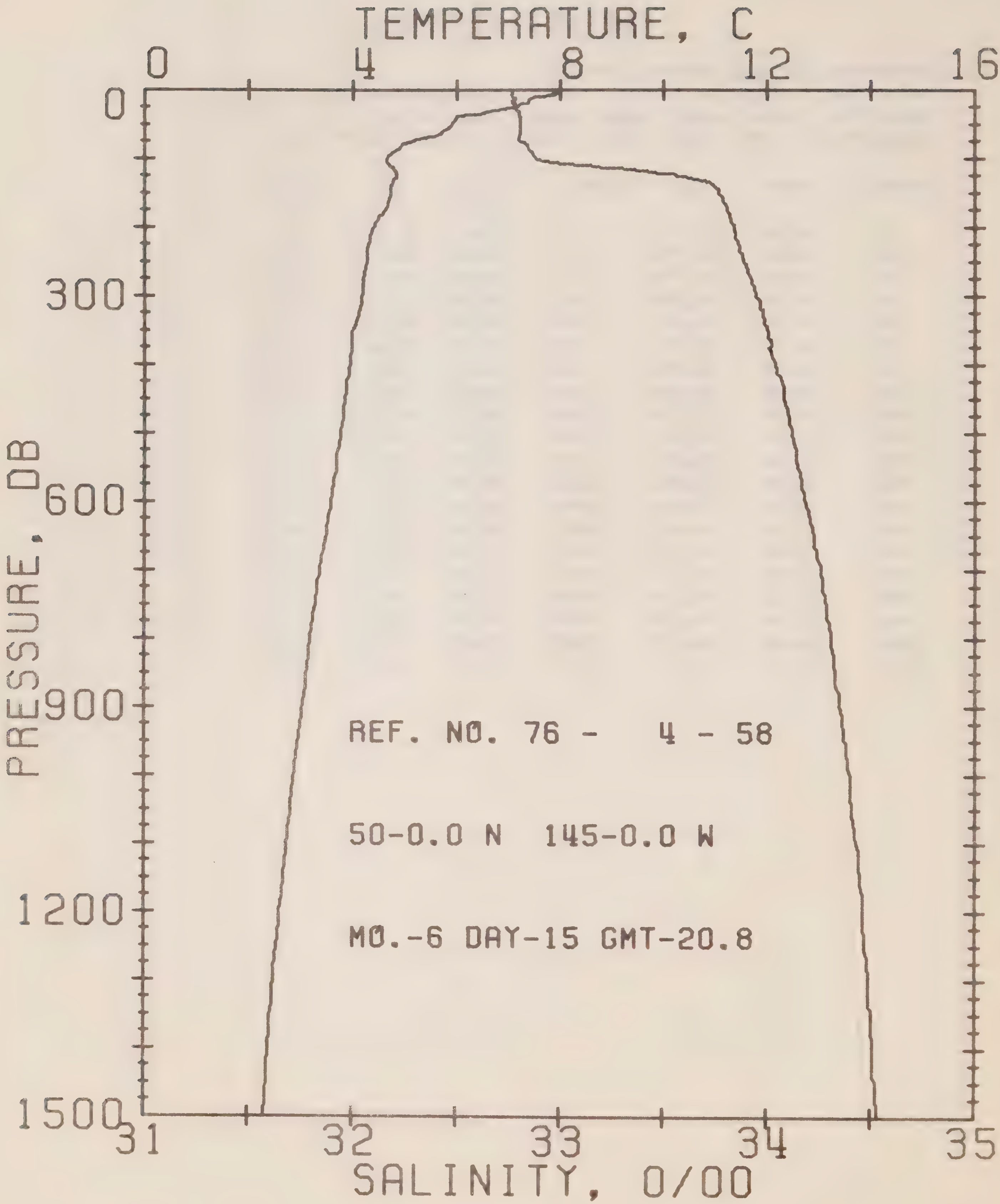
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 54 DATE 13/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 21.1
RESULTS OF STP CAST 215 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.21	32.78	0	25.67	233.2	0.0	0.0	1477.
10	7.16	32.78	10	25.67	232.8	0.23	0.01	1477.
20	7.12	32.78	20	25.68	232.5	0.47	0.05	1477.
30	6.34	32.80	30	25.80	221.4	0.70	0.11	1474.
50	6.02	32.80	50	25.84	217.8	1.13	0.28	1473.
75	5.43	32.82	75	25.93	209.4	1.67	0.63	1471.
100	4.69	32.84	99	26.02	200.5	2.18	1.08	1468.
125	4.85	33.42	124	26.47	158.8	2.65	1.62	1470.
150	4.78	33.78	149	26.76	131.3	3.01	2.12	1471.
175	4.56	33.81	174	26.81	127.0	3.33	2.65	1470.
200	4.36	33.84	199	26.85	122.9	3.64	3.25	1470.
225	4.27	33.86	223	26.88	120.6	3.95	3.91	1470.
250	4.21	33.88	248	26.90	118.9	4.25	4.63	1470.
300	4.04	33.94	298	26.96	112.8	4.83	6.26	1470.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 55
50-0.0 N 145-0.0 W
MO.-6 DAY-14 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

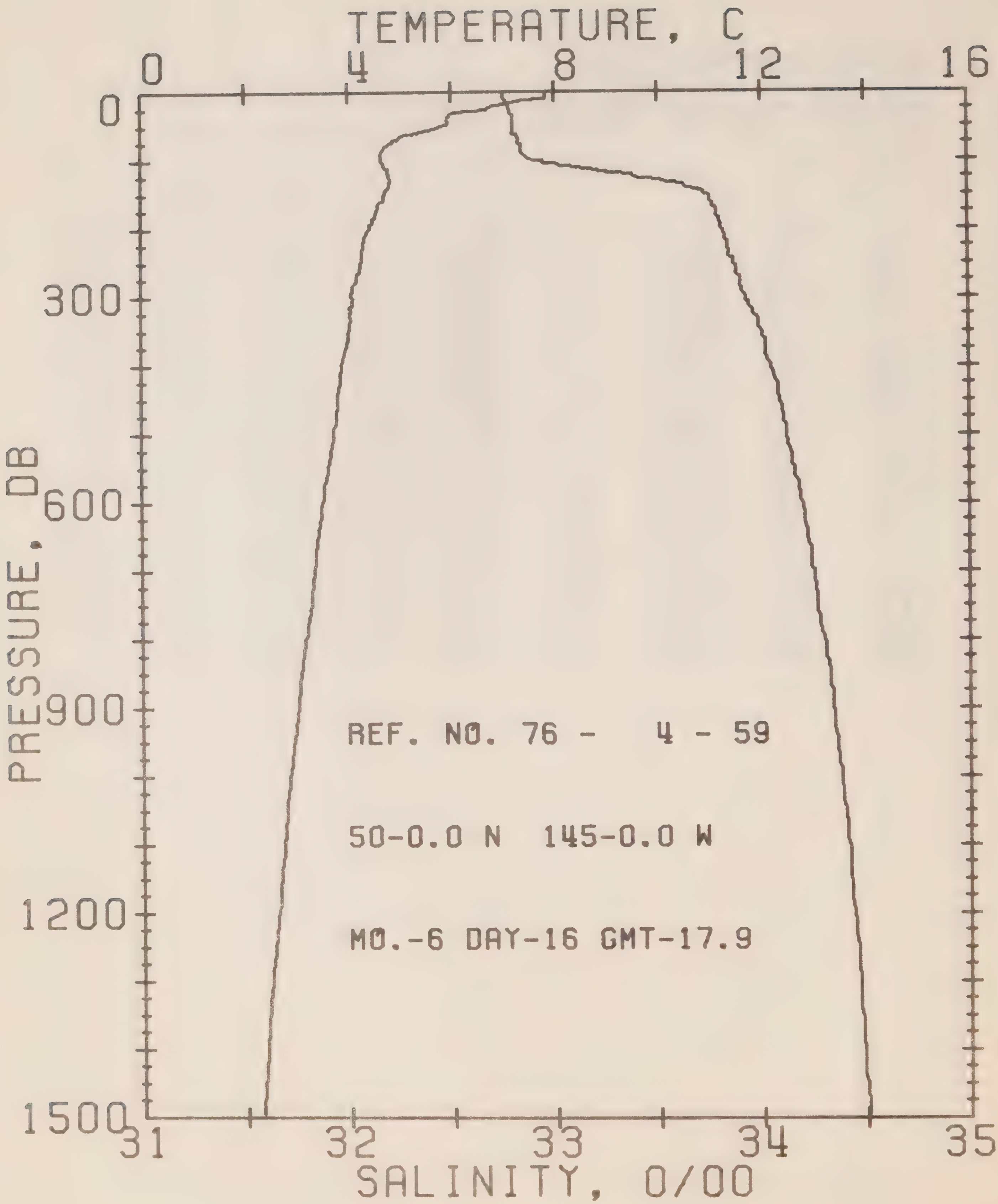
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 55 DATE 14/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 389 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.56	32.77	0	25.61	238.5	0.0	0.0	1478.
10	7.48	32.76	10	25.62	238.5	0.24	0.01	1478.
20	7.45	32.76	20	25.62	238.3	0.48	0.05	1478.
30	7.27	32.76	30	25.64	236.1	0.71	0.11	1478.
50	5.97	32.81	50	25.85	216.4	1.16	0.29	1473.
75	5.10	32.82	75	25.96	206.1	1.69	0.63	1470.
100	4.68	32.84	99	26.02	200.3	2.20	1.08	1468.
125	4.85	33.53	124	26.55	150.6	2.65	1.59	1470.
150	4.83	33.74	149	26.72	135.0	3.00	2.09	1471.
175	4.62	33.79	174	26.78	129.2	3.33	2.64	1471.
200	4.48	33.81	199	26.81	126.4	3.65	3.25	1471.
225	4.30	33.85	223	26.87	121.7	3.96	3.92	1470.
250	4.23	33.88	248	26.90	119.0	4.26	4.65	1470.
300	4.14	33.95	298	26.96	113.2	4.85	6.28	1471.
400	3.89	34.03	397	27.05	105.2	5.94	10.16	1472.
500	3.71	34.13	496	27.15	97.0	6.94	14.78	1473.
600	3.51	34.19	595	27.21	91.3	7.89	20.07	1474.
800	3.16	34.30	793	27.34	80.5	9.61	32.28	1475.
1000	2.86	34.38	990	27.43	72.6	11.13	46.22	1478.
1200	2.61	34.44	1188	27.50	66.3	12.51	61.69	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 58
50-0.0 N 145-0.0 W
MO.-6 DAY-15 GMT-20.8
31
32
33
34
35
SALINITY, 0/00

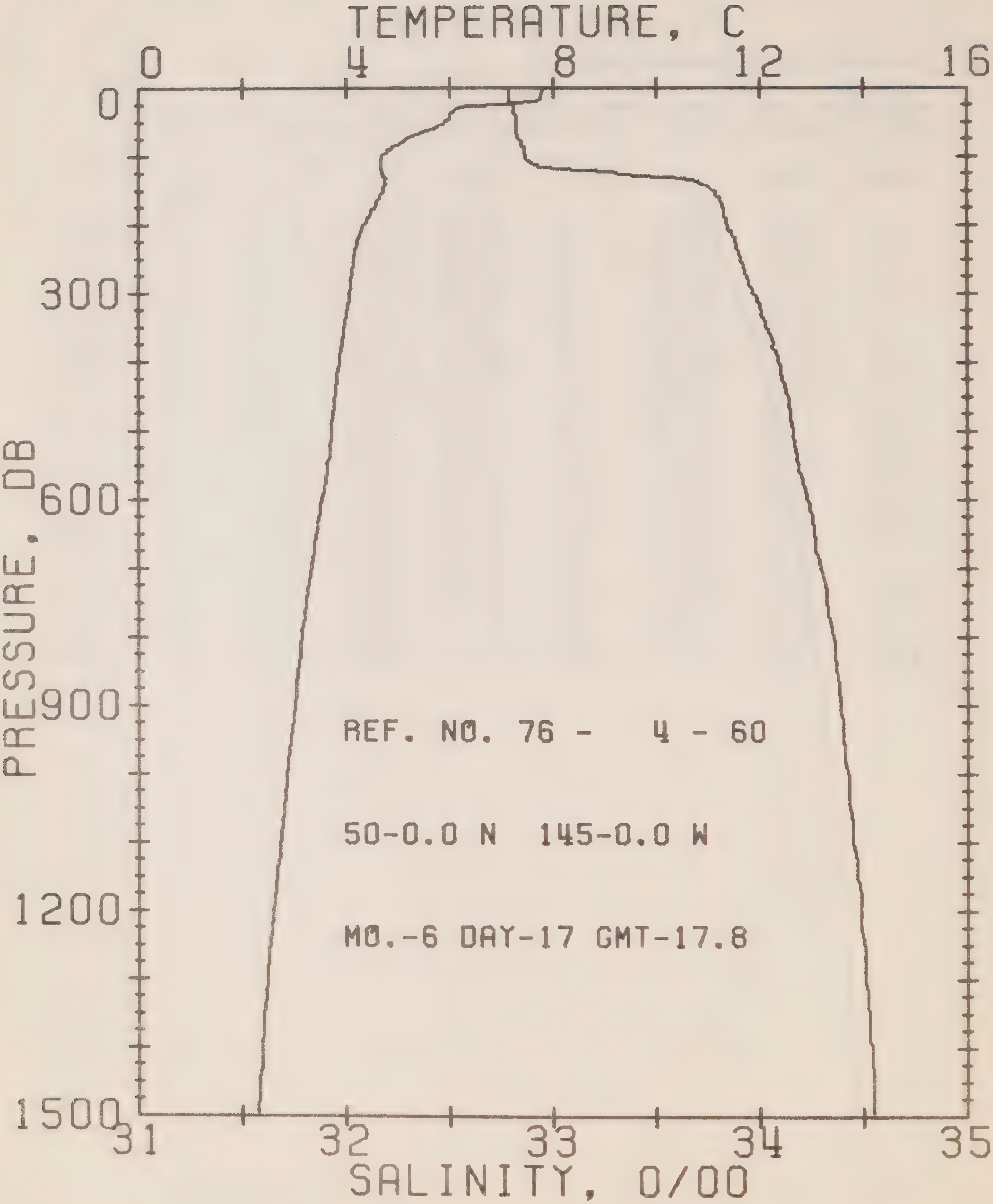
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 58 DATE 15/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 20.8
RESULTS OF STP CAST 394 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.93	32.77	0	25.56	243.5	0.0	0.0	1480.
10	7.69	32.77	10	25.59	240.6	0.24	0.01	1479.
20	7.35	32.77	20	25.64	236.2	0.48	0.05	1478.
30	6.73	32.79	30	25.74	226.9	0.71	0.11	1476.
50	5.90	32.81	50	25.86	215.6	1.15	0.29	1473.
75	5.13	32.81	75	25.95	207.1	1.68	0.62	1470.
100	4.65	32.88	99	26.06	197.0	2.19	1.07	1468.
125	4.83	33.56	124	26.58	148.2	2.62	1.57	1470.
150	4.71	33.77	149	26.76	131.4	2.96	2.05	1471.
175	4.60	33.81	174	26.80	127.4	3.29	2.58	1471.
200	4.39	33.84	199	26.85	123.2	3.60	3.18	1470.
225	4.29	33.86	223	26.87	120.8	3.90	3.84	1470.
250	4.26	33.89	248	26.90	118.5	4.20	4.57	1471.
300	4.17	33.95	298	26.96	113.5	4.78	6.19	1471.
400	3.94	34.04	397	27.05	105.1	5.87	10.07	1472.
500	3.76	34.12	496	27.14	98.0	6.88	14.70	1473.
600	3.57	34.18	595	27.21	92.0	7.84	20.03	1474.
800	3.17	34.31	793	27.34	79.9	9.54	32.19	1476.
1000	2.86	34.40	990	27.44	71.3	11.06	46.09	1478.
1200	2.59	34.46	1188	27.52	64.9	12.43	61.35	1480.


TEMPERATURE, C
0
4
8
12
16
PRESSURE, DB
0
300
600
900
1200
1500
REF. NO. 76 - 4 - 59
50-0.0 N 145-0.0 W
MO.-6 DAY-16 GMT-17.9
31
32
33
34
35
SALINITY, 0/00

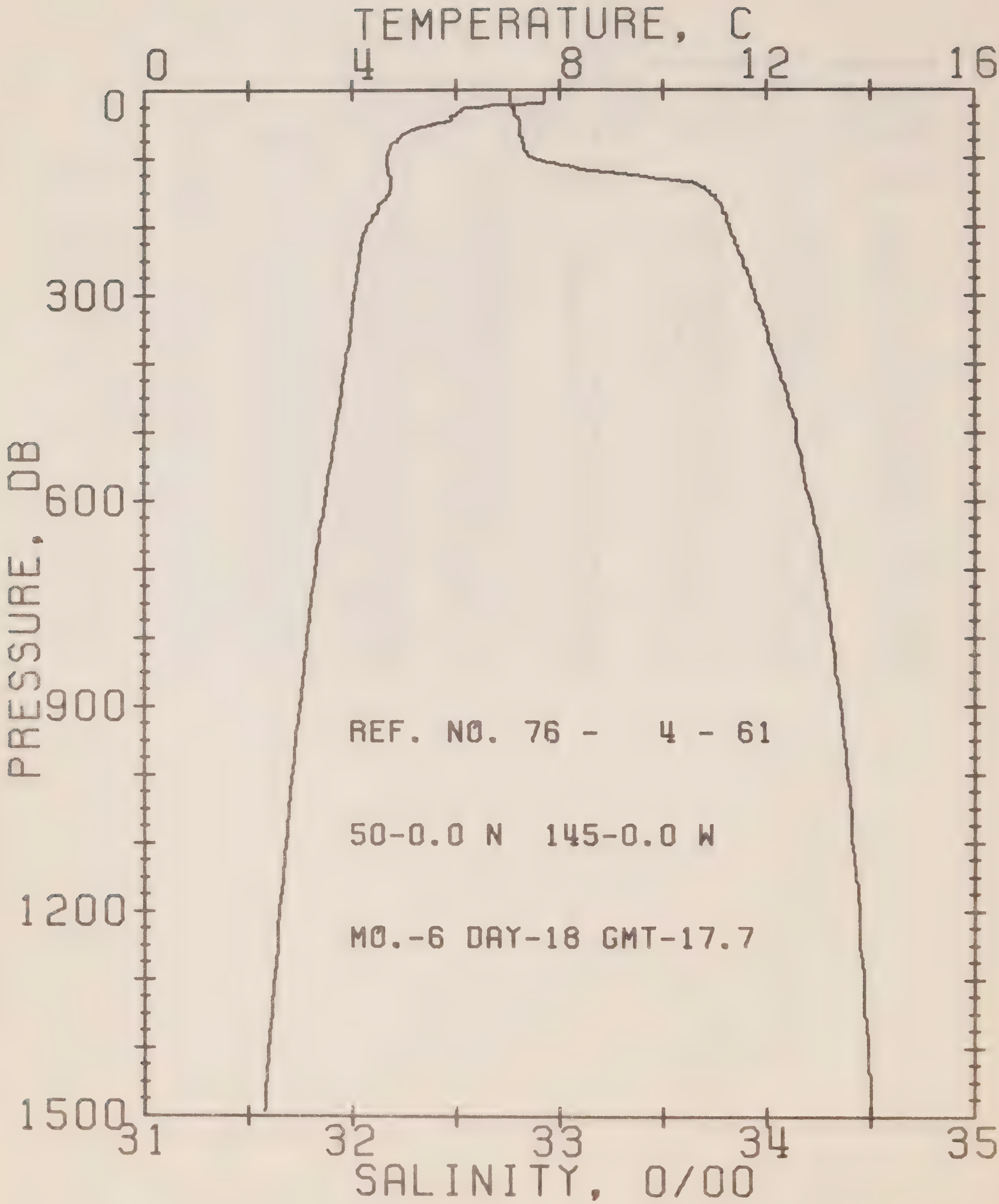
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 59 DATE 16/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.9
RESULTS OF STP CAST 393 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.83	32.75	0	25.56	243.6	0.0	0.0	1479.
10	7.81	32.75	10	25.56	243.7	0.24	0.01	1479.
20	6.91	32.78	20	25.71	229.8	0.48	0.05	1476.
30	6.08	32.79	30	25.82	219.0	0.71	0.11	1473.
50	5.85	32.80	50	25.86	215.8	1.14	0.28	1472.
75	4.83	32.83	75	26.00	202.5	1.66	0.61	1469.
100	4.65	32.90	99	26.08	195.5	2.16	1.06	1468.
125	4.83	33.43	124	26.48	157.9	2.60	1.56	1470.
150	4.71	33.74	149	26.73	133.6	2.96	2.07	1471.
175	4.55	33.79	174	26.79	128.3	3.29	2.61	1470.
200	4.41	33.81	199	26.82	125.7	3.61	3.22	1470.
225	4.30	33.84	223	26.86	122.4	3.92	3.88	1470.
250	4.25	33.87	248	26.89	119.9	4.22	4.62	1470.
300	4.08	33.93	298	26.95	114.0	4.80	6.26	1471.
400	3.87	34.05	397	27.07	103.7	5.89	10.13	1472.
500	3.70	34.12	496	27.14	97.5	6.90	14.73	1473.
600	3.49	34.19	595	27.22	90.5	7.83	19.99	1473.
800	3.15	34.30	793	27.34	80.4	9.55	32.16	1475.
1000	2.84	34.38	990	27.43	72.4	11.07	46.12	1477.
1200	2.60	34.44	1188	27.50	66.6	12.46	61.64	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 60
50-0.0 N 145-0.0 W
MO.-6 DAY-17 GMT-17.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 60 DATE 17/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.8
RESULTS OF STP CAST 325 POINTS TAKEN FROM ANALOG TRACE

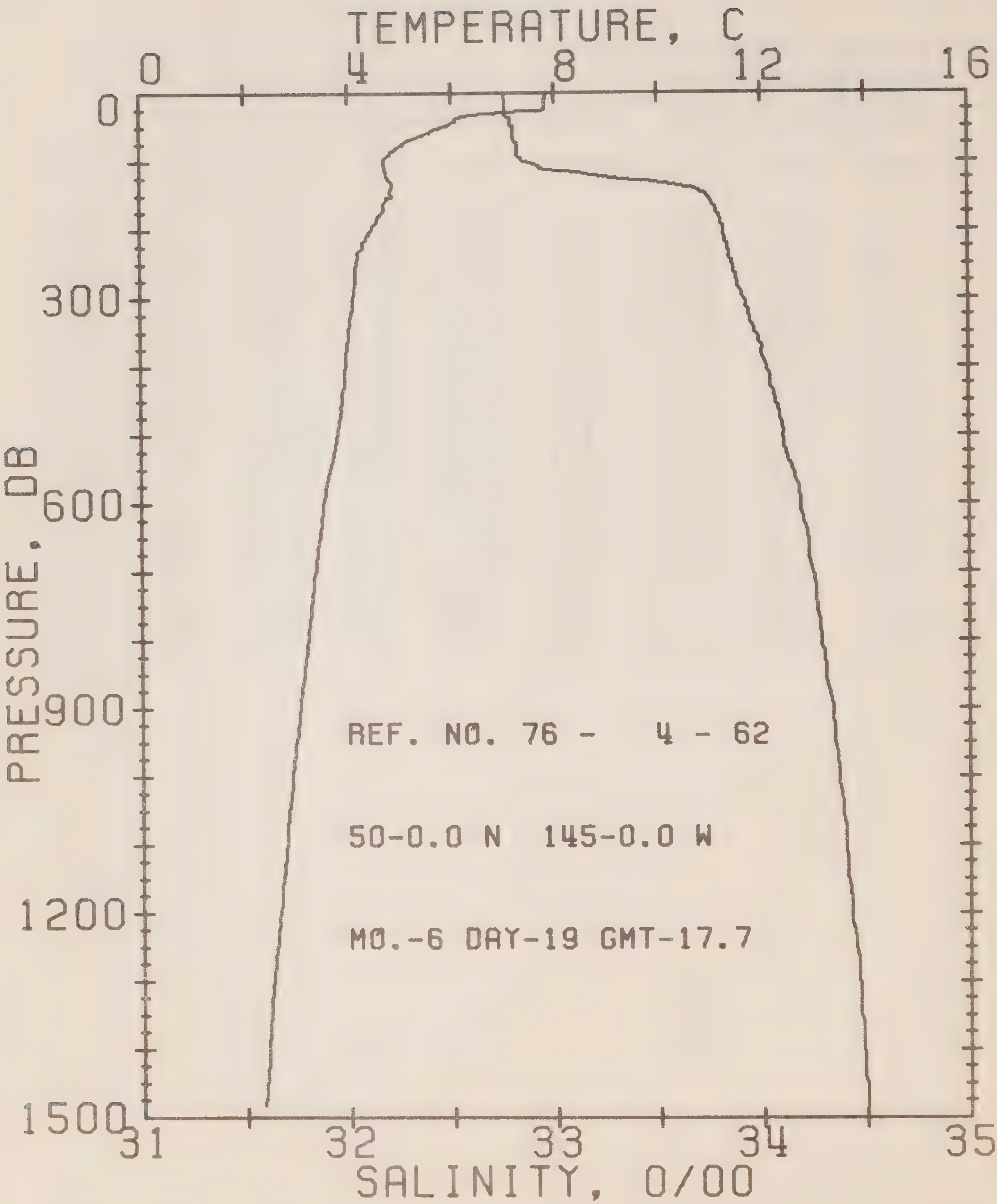
PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.79	32.79	0	25.59	240.2	0.0	0.0	1479.
10	7.77	32.79	10	25.60	240.3	0.24	0.01	1479.
20	7.67	32.79	20	25.61	239.1	0.48	0.05	1479.
30	6.13	32.81	30	25.83	218.1	0.71	0.11	1473.
50	5.89	32.82	50	25.87	214.8	1.14	0.28	1473.
75	5.15	32.83	75	25.97	205.6	1.67	0.62	1470.
100	4.69	32.87	99	26.05	198.2	2.17	1.07	1469.
125	4.69	33.32	124	26.40	164.6	2.65	1.61	1470.
150	4.70	33.78	149	26.77	130.5	3.00	2.10	1471.
175	4.54	33.82	174	26.82	126.1	3.32	2.63	1470.
200	4.34	33.84	199	26.85	122.6	3.63	3.22	1470.
225	4.21	33.88	223	26.90	118.5	3.93	3.87	1470.
250	4.14	33.91	248	26.93	115.7	4.22	4.58	1470.
300	4.06	33.97	298	26.99	110.9	4.79	6.17	1471.
400	3.87	34.09	397	27.10	100.7	5.84	9.92	1472.
500	3.71	34.16	496	27.17	94.7	6.81	14.38	1473.
600	3.52	34.23	595	27.25	88.0	7.73	19.53	1474.
800	3.14	34.35	793	27.38	76.4	9.38	31.20	1475.
1000	2.86	34.43	990	27.46	69.2	10.84	44.57	1478.
1200	2.59	34.49	1188	27.54	62.7	12.16	59.38	1480.



TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 61
50-0.0 N 145-0.0 W
MO.-6 DAY-18 GMT-17.7
31
32
33
34
35
SALINITY, O/OO

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 61 DATE 18/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.7
RESULTS OF STP CAST 344 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.71	32.76	0	25.58	241.3	0.0	0.0	1479.
10	7.72	32.76	10	25.58	241.8	0.24	0.01	1479.
20	7.67	32.76	20	25.59	241.2	0.48	0.05	1479.
30	6.09	32.78	30	25.81	219.8	0.71	0.11	1473.
50	5.61	32.81	50	25.90	212.3	1.14	0.28	1471.
75	4.85	32.82	75	25.99	203.4	1.66	0.61	1469.
100	4.66	32.88	99	26.06	197.1	2.16	1.06	1468.
125	4.74	33.41	124	26.47	158.4	2.62	1.59	1470.
150	4.71	33.73	149	26.73	134.4	2.98	2.08	1471.
175	4.49	33.79	174	26.80	127.8	3.31	2.63	1470.
200	4.28	33.82	199	26.84	123.5	3.62	3.23	1470.
225	4.16	33.85	223	26.88	120.3	3.93	3.88	1470.
250	4.12	33.89	248	26.91	117.2	4.22	4.60	1470.
300	4.03	33.94	298	26.97	112.6	4.80	6.21	1470.
400	3.86	34.05	397	27.07	103.6	5.88	10.07	1472.
500	3.67	34.14	496	27.16	95.6	6.87	14.61	1472.
600	3.47	34.21	595	27.24	89.0	7.80	19.80	1473.
800	3.13	34.31	793	27.35	79.3	9.47	31.69	1475.
1000	2.84	34.39	990	27.44	71.8	10.97	45.47	1478.
1200	2.59	34.45	1188	27.51	65.6	12.35	60.90	1480.


TEMPERATURE, C
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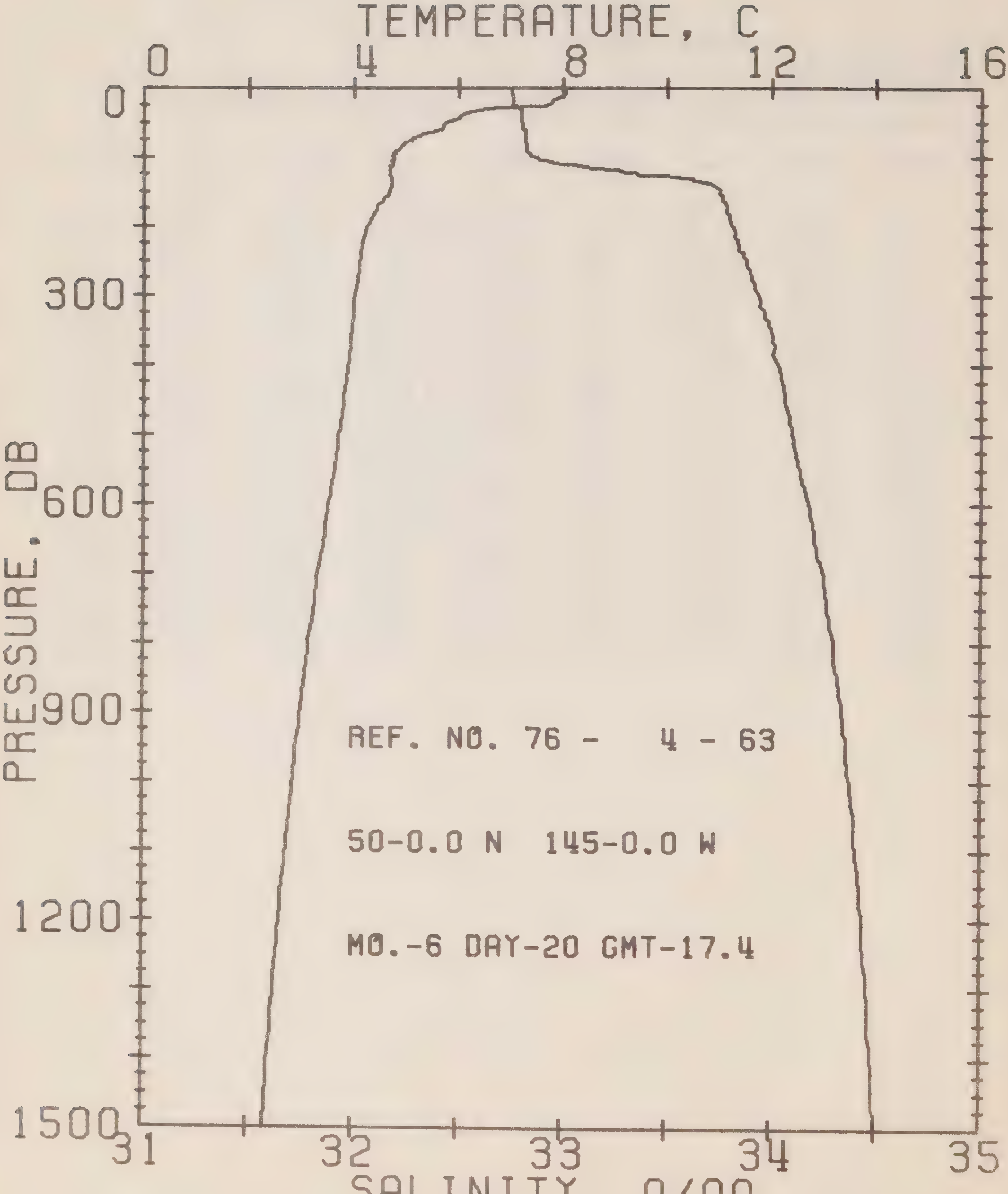
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 62
50-0.0 N 145-0.0 W
MO.-6 DAY-19 GMT-17.7
31
32
33
34
35
SALINITY, 0/00

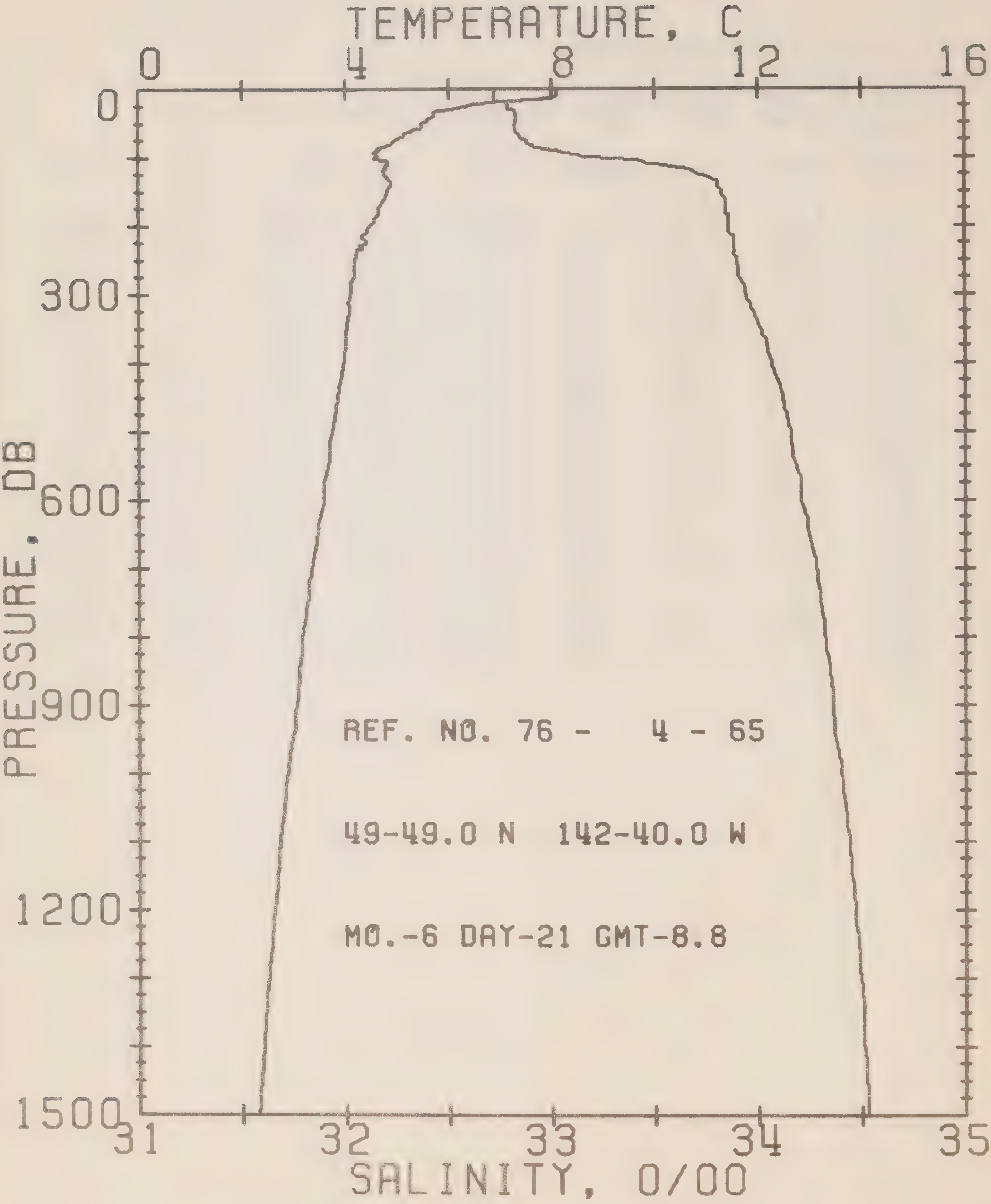
OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 62 DATE 19/ 6/76
POSITION 50- 0.0N, 145- 0.0W GMT 17.7
RESULTS OF STP CAST 357 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	7.84	32.76	0	25.56	243.1	0.0	0.0	1479.
10	7.82	32.75	10	25.56	243.6	0.24	0.01	1479.
20	7.82	32.76	20	25.57	243.3	0.49	0.05	1480.
30	6.82	32.76	30	25.70	230.3	0.73	0.11	1476.
50	5.84	32.80	50	25.86	215.7	1.17	0.29	1472.
75	5.07	32.82	75	25.97	205.7	1.69	0.62	1470.
100	4.68	32.85	99	26.03	199.6	2.20	1.08	1468.
125	4.79	33.33	124	26.40	164.9	2.67	1.61	1470.
150	4.84	33.74	149	26.72	135.0	3.03	2.12	1471.
175	4.65	33.79	174	26.78	129.4	3.36	2.67	1471.
200	4.44	33.82	199	26.83	125.2	3.68	3.27	1470.
225	4.28	33.84	223	26.86	122.3	3.99	3.94	1470.
250	4.15	33.86	248	26.89	119.6	4.29	4.67	1470.
300	4.08	33.91	298	26.94	115.4	4.88	6.32	1471.
400	3.94	34.02	397	27.04	106.4	5.98	10.25	1472.
500	3.77	34.10	496	27.12	99.4	7.01	14.96	1473.
600	3.50	34.19	595	27.22	91.0	7.96	20.28	1473.
800	3.18	34.29	793	27.33	81.6	9.68	32.52	1476.
1000	2.88	34.37	990	27.42	73.6	11.23	46.68	1478.
1200	2.64	34.43	1188	27.49	67.6	12.64	62.47	1480.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 63
50-0.0 N 145-0.0 W
MO.-6 DAY-20 GMT-17.4
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 63   DATE 20/ 6/76
POSITION 50- 0.0N, 145- 0.0W   GMT 17.4
RESULTS OF STP CAST   344 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.04	32.76	0	25.54	245.8	0.0	0.0	1480.
10	8.02	32.75	10	25.53	246.6	0.25	0.01	1480.
20	7.80	32.76	20	25.57	243.1	0.49	0.05	1480.
30	6.57	32.79	30	25.76	224.9	0.73	0.11	1475.
50	5.77	32.80	50	25.87	214.8	1.17	0.29	1472.
75	5.09	32.82	75	25.96	205.9	1.69	0.62	1470.
100	4.76	32.87	99	26.04	198.9	2.20	1.08	1469.
125	4.70	33.36	124	26.43	161.7	2.66	1.60	1470.
150	4.67	33.75	149	26.75	132.5	3.01	2.08	1470.
175	4.43	33.79	174	26.80	127.2	3.33	2.62	1470.
200	4.25	33.82	199	26.85	123.2	3.64	3.22	1470.
225	4.16	33.84	223	26.87	121.0	3.95	3.88	1470.
250	4.11	33.88	248	26.91	117.7	4.25	4.60	1470.
300	4.02	33.94	298	26.97	112.6	4.82	6.22	1470.
400	3.90	34.03	397	27.05	105.3	5.91	10.09	1472.
500	3.72	34.10	496	27.12	99.2	6.93	14.77	1473.
600	3.53	34.18	595	27.21	91.9	7.89	20.14	1474.
800	3.15	34.30	793	27.34	80.4	9.61	32.39	1475.
1000	2.86	34.38	990	27.43	72.8	11.15	46.41	1478.
1200	2.61	34.44	1188	27.50	66.6	12.54	62.00	1480.
1500	2.31	34.50	1483	27.57	60.3	14.44	83.10	1484.


TEMPERATURE, C
0
4
8
12
16
0
300
600
900
1200
1500
PRESSURE, DB
REF. NO. 76 - 4 - 65
49-49.0 N 142-40.0 W
MO.-6 DAY-21 GMT-8.8
31
32
33
34
35
SALINITY, 0/00

OFFSHORE OCEANOGRAPHY GROUP
REFERENCE NO. 76- 4- 65 DATE 21/ 6/76
POSITION 49-49.0N, 142-40.0W GMT 8.8
RESULTS OF STP CAST 280 POINTS TAKEN FROM ANALOG TRACE

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT. EN	SOUND
0	8.10	32.73	0	25.50	248.9	0.0	0.0	1480.
10	8.09	32.72	10	25.50	249.9	0.25	0.01	1480.
20	6.88	32.78	20	25.71	229.4	0.49	0.05	1476.
30	6.09	32.79	30	25.82	219.1	0.72	0.11	1473.
50	5.46	32.83	50	25.93	209.1	1.14	0.28	1471.
75	4.99	32.86	75	26.01	201.5	1.66	0.61	1469.
100	4.65	33.15	99	26.27	176.8	2.13	1.03	1469.
125	4.74	33.73	124	26.72	134.4	2.51	1.46	1470.
150	4.80	33.82	149	26.79	128.2	2.83	1.92	1471.
175	4.64	33.85	174	26.83	124.8	3.15	2.44	1471.
200	4.46	33.86	199	26.86	122.5	3.46	3.03	1471.
225	4.39	33.89	223	26.89	119.6	3.76	3.68	1471.
250	4.18	33.90	248	26.92	116.9	4.06	4.40	1470.
300	4.07	33.94	298	26.96	113.2	4.63	6.01	1471.
400	3.95	34.07	397	27.07	103.4	5.71	9.86	1472.
500	3.73	34.16	496	27.17	94.8	6.70	14.39	1473.
600	3.56	34.21	595	27.23	90.1	7.62	19.55	1474.
800	3.16	34.32	793	27.35	79.0	9.30	31.44	1475.
1000	2.86	34.40	990	27.45	71.0	10.80	45.20	1478.
1200	2.61	34.47	1188	27.52	64.5	12.15	60.33	1480.
1500	2.30	34.53	1483	27.60	58.0	13.97	85.38	1484.

Surface Salinity and Temperature Observations

(P-76-4)

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS
CRUISE REFERENCE NUMBER 76- 4

DATE/TIME YR	MO	DY	GMT	SALINITY 0/00	TEMP C	LONGITUDE WEST
76	5	7	2300	30.723b	10.4	125-33
76	5	7	2300	30.702	10.4	125-33
76	5	8	130	30.732b	10.2	126- 0
76	5	8	130	30.724	10.2	126- 0
76	5	8	400	32.178b	9.2	126-40
76	5	8	400	32.171	9.2	126-40
76	5	8	800	32.182b	9.5	127-40
76	5	8	800	32.179	9.5	127-40
76	5	8	1200	32.053b	9.2	128-40
76	5	8	1200	32.040	9.2	128-40
76	5	8	1830	32.515b	9.3	130-40
76	5	8	1830	32.462	9.3	130-40
76	5	8	1830	32.520	9.3	130-40
76	5	9	300	32.544	7.8	132-40
76	5	9	635	32.545	7.4	133-40
76	5	9	940	32.532	7.2	134-40
76	5	9	1240	32.511	7.0	135-40
76	5	9	1800	32.541	6.6	137-40
76	5	9	2100	32.552	6.4	138-40
76	5	9	2345	32.607		139-40
76	5	10	320	32.647	6.0	140-40
76	5	10	1100	32.736	5.7	142-40
76	5	11	0	32.774	5.6	ON STATION
76	5	12	0	32.762	5.8	ON STATION
76	5	13	0	32.771	5.8	ON STATION
76	5	14	0	32.766	5.8	ON STATION
76	5	15	0	32.739	5.9	ON STATION
76	5	16	0	32.749	5.7	ON STATION
76	5	17	0	32.766	5.6	ON STATION
76	5	18	0	32.754	5.9	ON STATION
76	5	19	0	32.759	5.9	ON STATION
76	5	20	0	32.757	5.9	ON STATION
76	5	21	0	32.768	5.9	ON STATION
76	5	22	0	32.787	5.8	ON STATION
76	5	23	0	32.751	6.1	ON STATION
76	5	24	0	32.738	6.1	ON STATION
76	5	25	0	32.743	5.9	ON STATION
76	5	26	0	32.761	6.0	ON STATION
76	5	27	0	32.758	6.1	ON STATION
76	5	28	0	32.755	6.0	ON STATION
76	5	29	0	32.767	5.9	ON STATION
76	5	30	0	32.758	6.0	ON STATION
76	5	31	0	32.762	6.1	ON STATION
76	6	1	0	32.772	6.6	ON STATION

SURFACE SALINITY AND TEMPERATURE OBSERVATIONS
CRUISE REFERENCE NUMBER 76- 4

DATE/TIME				SALINITY	TEMP	LONGITUDE
YR	MO	DY	GMT	0/00	C	WEST
76	6	2	0	32.782	7.2	ON STATION
76	6	3	0	32.783	6.6	ON STATION
76	6	4	0	32.775	6.7	ON STATION
76	6	5	0	32.774	7.2	ON STATION
76	6	6	0	32.763	7.6	ON STATION
76	6	7	0	32.780	7.4	ON STATION
76	6	8	0	32.770	7.6	ON STATION
76	6	9	0	32.749	7.6	ON STATION
76	6	10	0	32.772	7.6	ON STATION
76	6	11	0	32.771	7.3	ON STATION
76	6	12	0	32.771	7.5	ON STATION
76	6	13	0	32.763	7.3	ON STATION
76	6	14	0	32.758	7.4	ON STATION
76	6	15	0	32.752	8.2	ON STATION
76	6	16	0	32.756	8.0	ON STATION
76	6	17	0	32.760	8.0	ON STATION
76	6	18	0	32.755	7.8	ON STATION
76	6	19	0	32.799	7.8	ON STATION
76	6	20	0	32.749	9.0	ON STATION
76	6	21	220	32.726	8.2	143-40
76	6	21	1100	32.719	8.2	142-40
76	6	21	1325	32.610	8.3	141-40
76	6	21	1550	32.602	8.4	140-40
76	6	21	2130	32.496	8.7	138-40
76	6	22	125	32.498	8.7	137-40
76	6	22	400	32.518	9.0	136-40
76	6	22	700	32.495	9.0	135-40
76	6	22	945	32.483	9.3	134-40
76	6	22	1210	32.487	9.8	133-40
76	6	22	1445	32.461	10.0	132-40
76	6	22	1735	32.427	10.0	131-40
76	6	22	2020	32.386	10.3	130-40
76	6	22	2300	32.330	10.3	129-40
76	6	23	150	32.116	10.7	128-40
76	6	23	520	32.257	11.3	127-40
76	6	23	800	31.672	11.8	126-40

b DENOTES SALINITY SAMPLE TAKEN FROM A
BUCKET. ALL OTHER SAMPLES TAKEN FROM
THE SEAWATER LOOP

Pacific Marine Science Report 76-26

SALINITY, TEMPERATURE, TURBIDITY AND METEOROLOGICAL OBSERVATIONS IN THE BEAUFORT SEA:

Summer 1974, Spring and Summer 1975

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R.H. Herlinveaux, B.R. de Lange Boom
and G.R. Wilton

Institute of Ocean Sciences, Patricia Bay
Victoria, B.C.

December 1976

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ABSTRACT

Salinity, temperature, turbidity and meteorological observations were carried out in the Beaufort Sea during the summer of 1974, and the spring and summer of 1975. Salinity and temperature were determined from a conductivity-temperature-pressure instrument. Turbidity observations were carried out over a 1 metre path length. Meteorological observations were observed from standard meteorological instruments. The summer observations were carried out from shipboard, and the spring observations were taken at ice camps through approximately 2 metres of ice at three locations.

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1. INTRODUCTION

The data presented in this report were collected as part of the Beaufort Sea Project, a study of environmental factors in the southern Beaufort Sea area in relation to proposed offshore drilling for oil and gas. A comprehensive report of that project, containing a summary of these data and a description of the physical oceanography of the area will be published separately.

During the summer of 1974 and the spring and summer of 1975 salinity, temperature, turbidity and current profiles were obtained. Meteorological observations were also taken as well as the ship's drift and the ice drift. Wave data were also collected from a surface wave-measuring buoy.

The data have been divided into three reports:

1.1 Salinity, temperature, turbidity and meteorological observations in the southern Beaufort Sea - Summer 1974, Spring and Summer 1975.

1.2 Water movements at surface and at depth observed from recorded ship's drift, ice drift, and current meter observations in the southern Beaufort Sea - Summer 1974 and Spring and Summer 1975.

1.3 Wave records in the southern Beaufort Sea - Summer 1974 and 1975.

This is the first report.

2. DATA COLLECTION

During the summer of 1974 profiles of salinity temperature and turbidity were obtained at 63 stations in the southeastern Beaufort Sea (Figure 1). Meteorological observations were also made.

During the spring of 1975 similar oceanographic and meteorological observations were carried out at 41 locations (Figure 2).

In the summer of 1975 oceanographic and meteorological observations were made from the M.V. Pandora. These station positions are shown in Figure 3.

Also meteorological and oceanographic observations were made from the CANMAR barge site A. (Figure 3).

2.1 The observation Platform

During the summer of 1974 observations were carried out from the M.V. Theta, an ice-strengthened vessel (chartered) resembling a North Sea trawler (Figure 4).

Following standard practice, observations were made from the starboard side. Bottle casts and turbidity measurements were made from an "A" frame gallows located on the main deck just aft of the break in the forecastle, while STD casts and current profiles were made from a small gallows located on the main deck near the forward corner of the deckhouse. A small portable laboratory located on the main deck

between the helicopter platform and the deckhouse contained the electronic equipment.

During the spring the various synoptic observations were carried out from a Bell 205 helicopter sitting on the ice (Figure 5). The CTD casts were carried out by having the recorder, winch and generator in the helicopter. The helicopter normally landed beside a lead, or a hole was drilled in the ice through which the equipment could be lowered.

The time series were taken at an ice camp from inside a portable shelter (Figure 6). Four men occupied these ice camps taking hourly observations for 2-4 days.

2.2 Meteorological Observations

During the summer of 1974 meteorological observations were made by a trained technician as well as others in the scientific group. This program was not a success it might have been due to the fact that incomplete records were kept. The most complete record existed in the vessel's bridge logs.

Summer 1975: AES supplied meteorological observers aboard M.V.Theta and M.V. Pandora 11 and oil companies also collected data at various sites including the CANMAR drill site. All these data are on file at AES, Downsview, Ontario. For further information contact Mr. Howard Kagawa who has compiled all the data taken in the area.

2.3 Salinity and Temperature Measurements

2.3.1 Bottle Casts

Bottle casts were carried out (Figure 7) primarily for the collection of water for chemical analysis. Reversing thermometers were used on the bottles and salinity samples were drawn both to calibrate the STD (described later) and as a backup in case of poor STD data. Some salinity samples were analysed aboard ship with an Autolab laboratory salinometer, and the remainder at the base laboratory in Victoria, British Columbia. The reversing thermometers gave considerable trouble and at times the failure rate approached 50% in both spring and summer operations.

The accuracy of the salinity determinations carried out in the above manner was generally about ±0.005°/₀₀. At low salinities, particularly below 10°/₀₀, the uncertainty is much greater; however only a minority of the samples had such low salinities, most of the values being greater than 30°/₀₀.

For the reversing thermometers the accuracy of ±0.02°C is expected for a single thermometer measurement while for the average of two thermometers at the same depth the uncertainty is ±0.01°C. A few of the thermometers used had smaller uncertainties.

Normal bottle cast procedures were followed using standard depths of 0, 1, 3, 5, 7, 10, 15, 20, 25, 30, 40, 50, 75, 100, 125, 150, 175 and 200 metres. Modifications were made as conditions required. "Soaking" times of 5 to 10 minutes were used.

2.3.2 *STD and CTD Measurements

During the summer of 1974 a Guildline 8202 Arctic probe with a 8101 deck unit (Figure 8) was used to obtain vertical profiles of salinity and temperature. During the spring and summer 1975, a similar CTD probe was used and vertical profiles of conductivity and temperature were obtained. These profiles were recorded on paper charts. A 0 to 300 decibar pressure transducer was used, giving depth range to 300 metres. The unit worked well except for a period off Norway Island when temperatures outside the helicopter ranged between -35°C to -40°C. As soon as the helicopter's side door was opened the ink on the recorder pens would freeze.

2.3.3 In-Situ Salinometer

During the spring 1975 a Hydrolab model TC-2 Conductivity meter was used as a back-up for the CTD probe.

The values obtained from this instrument should be considered qualitative rather than quantitative. In some cases, the temperature was below that of the freezing point of water.

2.4 Turbidity Measurements

Two different types of instruments were used for light transmission observations. During the summer a Hydrowerkstatten #382 with a 75 m long cable was used. The underwater unit consisted of an incandescent lamp in a watertight housing and a photocell in a separate housing. The two units were mounted on a piece of aluminum channel with a through-the-water path length of 1 metre. Included in the photocell housing were two optical filters (RG1 and BG12), the filter to be used being selected by the polarity of an applied voltage.

At first, condensation of moisture on the inside of the lenses resulting from the low water temperatures presented a problem. This problem was solved by inserting a small package of silica gel in each underwater unit. The light filament was broken after the first station, and a replacement light was improvised from an automobile lamp. After this repair was effected, the unit successfully used for the rest of the cruise. The readout unit was located on deck and the measurements were in terms of photocell current.

The reading in air was used as a reference (100% transmission). The profiles are considered to be qualitative rather than quantitative, particularly those associated with the BG12 values, which came out greater than 100% in a number of cases. It is possible that this may have been a temperature effect. The general shape of the profiles appeared reasonable, the "turbidicline" coinciding with or falling just below the depths of the halocline and thermocline

* STD - salinity, temperature, depth.
CTD - conductivity, temperature, depth.

The procedure followed in making a cast is outlined below. After a careful cleaning of the lenses on the underwater unit, the "in-air" readings were taken with both filters, taking care not to expose the photocell to the direct sun. Readings were then taken at standard depths (down to a maximum of 65 m) using one filter on the way down and the other on the way up.

During the spring a Hydroproducts 612S turbidity meter (Figure 9) was used which had no filters and only a white light source. The path length was one metre. It was used in a similar manner to the other unit and several problems were encountered, including a flooding of the light source. This was remedied in the field by a properly fitted "O" ring.

A comparison of the two transmissiometers was made and the results were plotted. This is shown in Figure 10.

3. DATA REDUCTION

The turbidity measurements have been plotted as profiles of red-to-green light transmission, i.e., percent of value in air versus depth.

The STD and CTD profiles were digitized onto cards using a Gradicon digitizing table. The cards were run through a program that converted digitized inches into values of pressure, salinity and temperature and output them on binary tape. Conductivities were converted to salinities using the Perkins-Walker formulae.

Another program took these values and calculated actual depths, sigma-τ's, specific volume anomalies, dynamic heights, potential energies and sound velocities at standard pressure intervals. The binary tape from this program was then run through a plotting program which produced vertical profiles of temperature and salinity versus depth for each cast.

For the summer 1974 data another stage of processing was added. A program took the values of pressure, salinity and temperature and compared them with bottle cast data. A linear correction equation was obtained

$$\Delta y = a + by$$

where Δy is the correction to be applied to the variable y, i.e., salinity or temperature as measured by the STD, and "a" and "b" are constants determined by a least squares fit.

These corrections were then applied to the salinities and temperatures and a binary tape with the corrected values was obtained. These corrected values were then used in the rest of the processing.

4. SUMMER 75-3

4.1 CANMAR Barge

During August a three-day time series was carried out from the CANMAR barge site at 70° 10.6' N and 132° 58.8' W. CST casts, turbidity and bottle casts were done.

The measurements were taken from the NNW end of the accomodation barge. This happened to always be on the upstream side.

4.2 In-Situ Salinometer (Beckman)

Most of the results using the CST were prepared by Beak Consultants. Wire angles were not measured and sometimes were as great as 30°. Therefore the results should be considered only as an indicator of gradients.

4.3 Turbidity

A Hydroproducts 612S turbidity meter with a one-metre path length was used. The meter uses 92% as an air reference but the results were converted to 100% transmission.

4.4 Bottle Casts

Two bottle casts were done using a Fjarlie sample bottle at depths of 0, 1, 3, 5, 7, 10, 15, 20, 25, 27 metres.

PERSONNEL

Summer 1974; Spring 1975

Data Collected by:

R.H. Herlinveaux
B.R. de Lange Boom
G.R. Wilton
A.R. Milne
B.D. Smiley

Summer 1975

M.V. Pandora II

Data collected by:

P. Erikson
R. Bellegay
C. Jackson
D. Schmitt

Data processed by D. Schmitt

CANMAR Barge

Data collected by G. Wilton

M.V. Pandora II and M.V. Theta

Meteorological Observers

D. Brown
D. Watson

Data processed by:

B.R. de Lange Boom
G. Wilton
A. Weir

LIST OF FIGURES

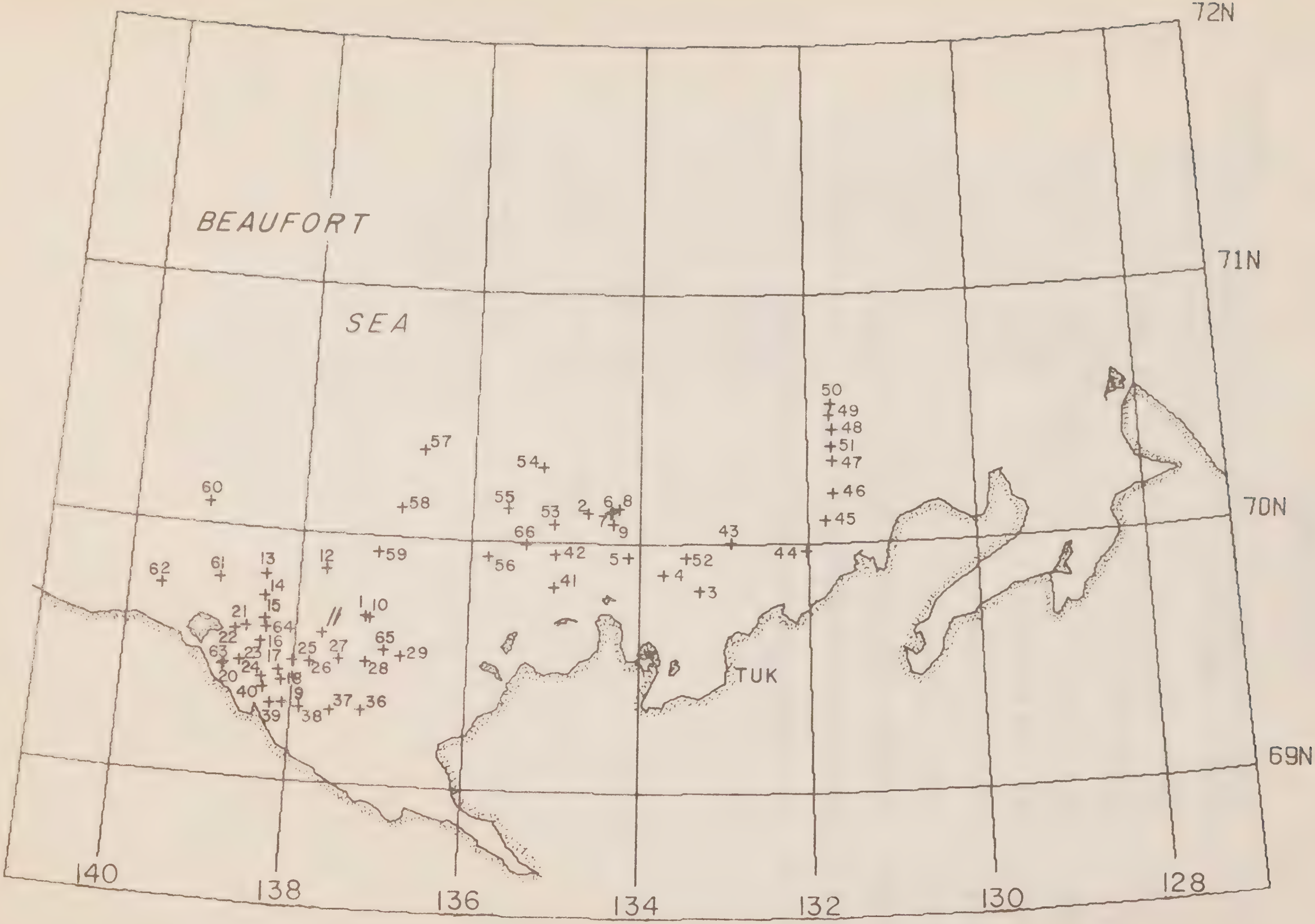

Figure 1. Oceanographic stations, 1974 summer (stations 30 to 35 were for bottom samples only and were not plotted).

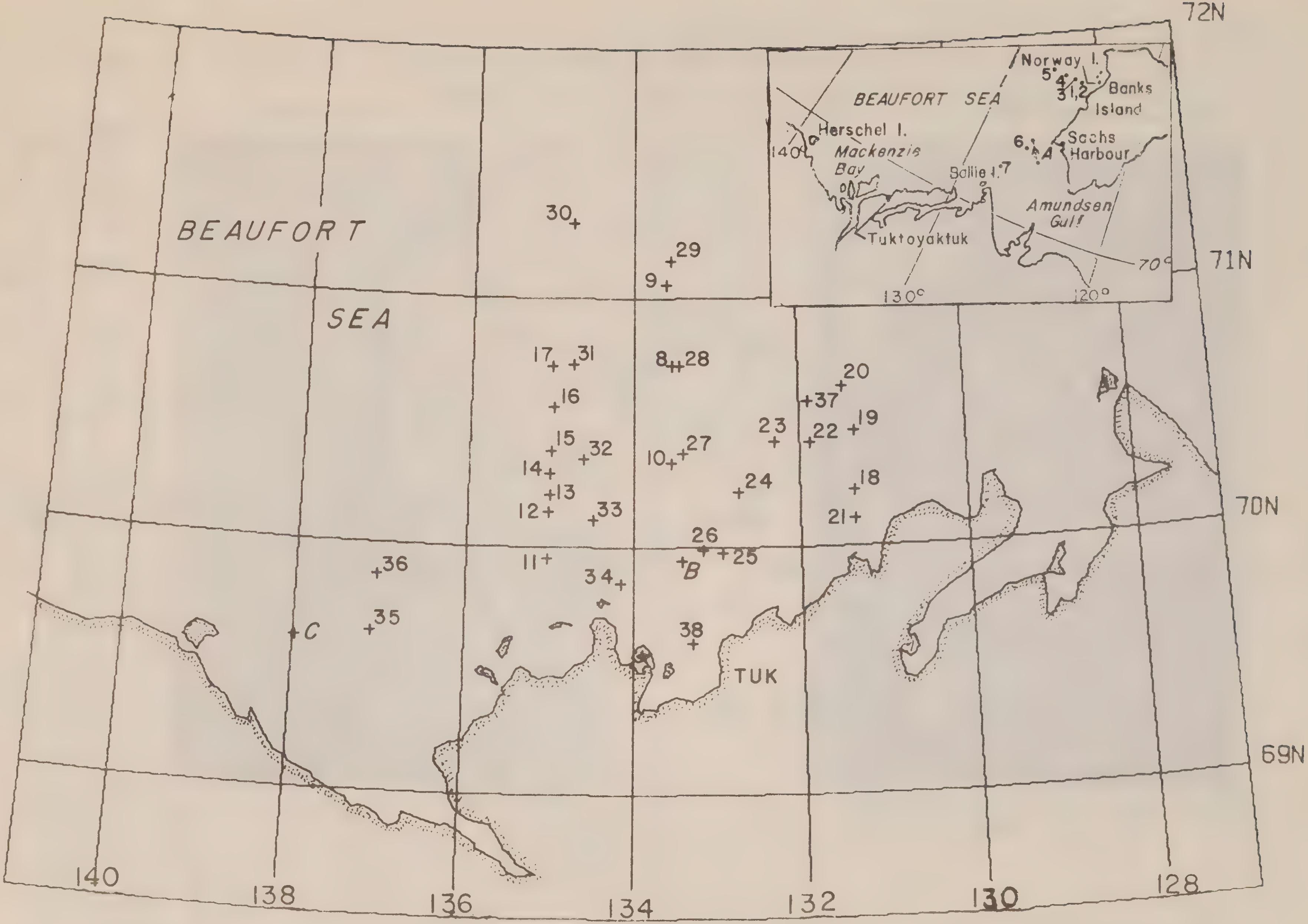

Figure 2. Oceanographic stations, 1975 spring with the ice camps indicated by letters.

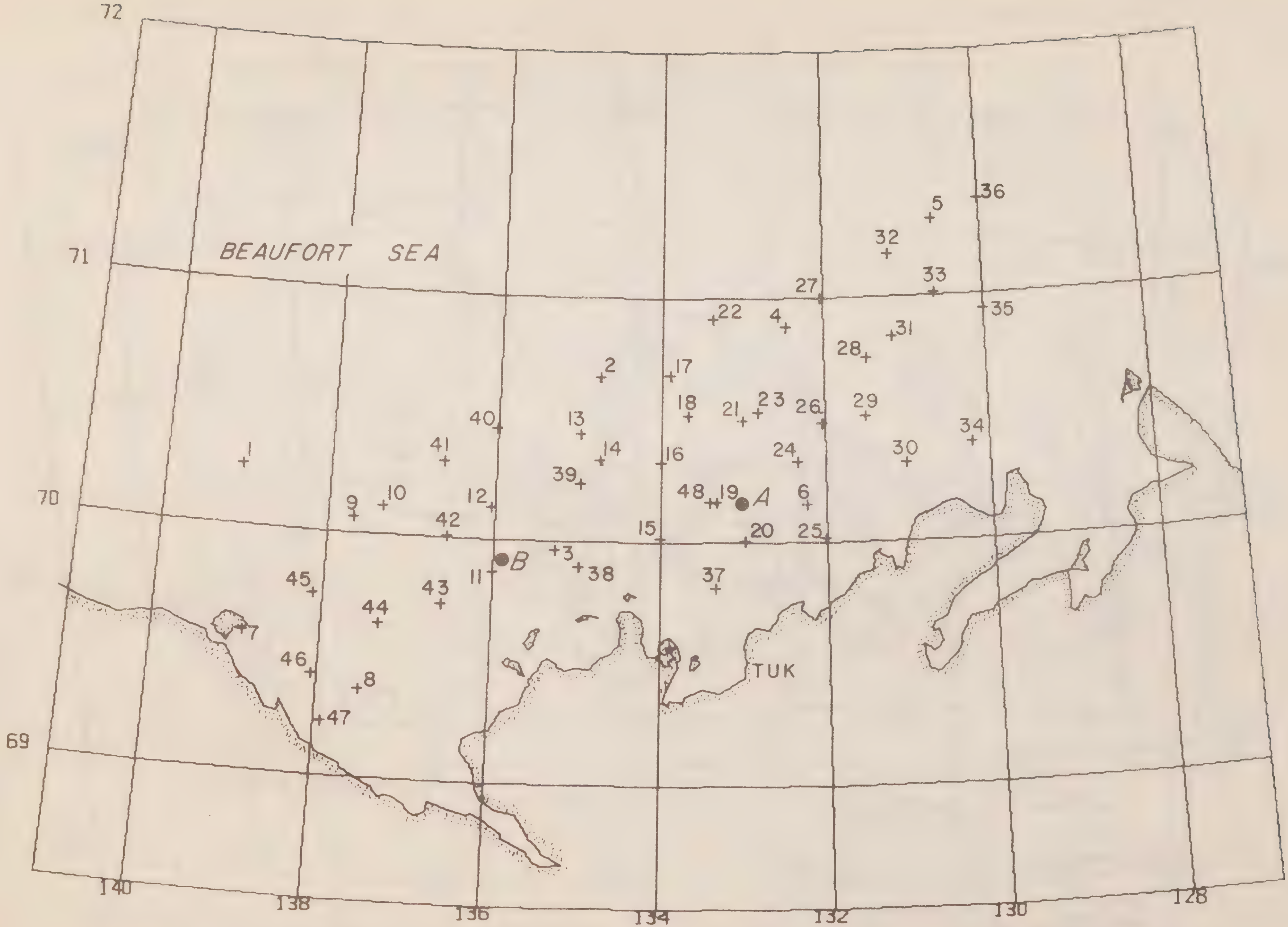

Figure 3. Oceanographic stations, 1975 summer (A indicates position of Canmar barge and B indicates position of wave buoy).

Figure 4   M.V. THETA

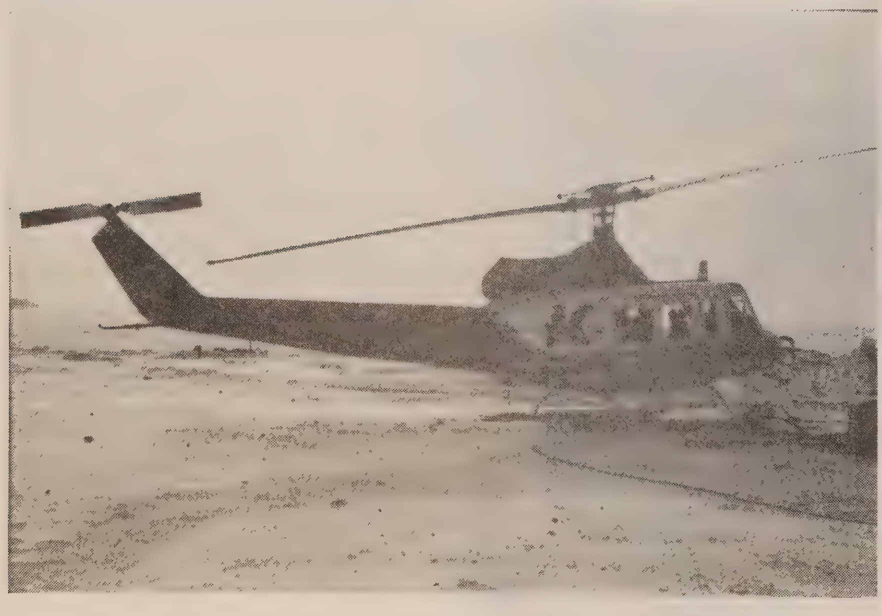

Figure 5   Bell 205 Helicopter

Figure 6 Portable ice shelter

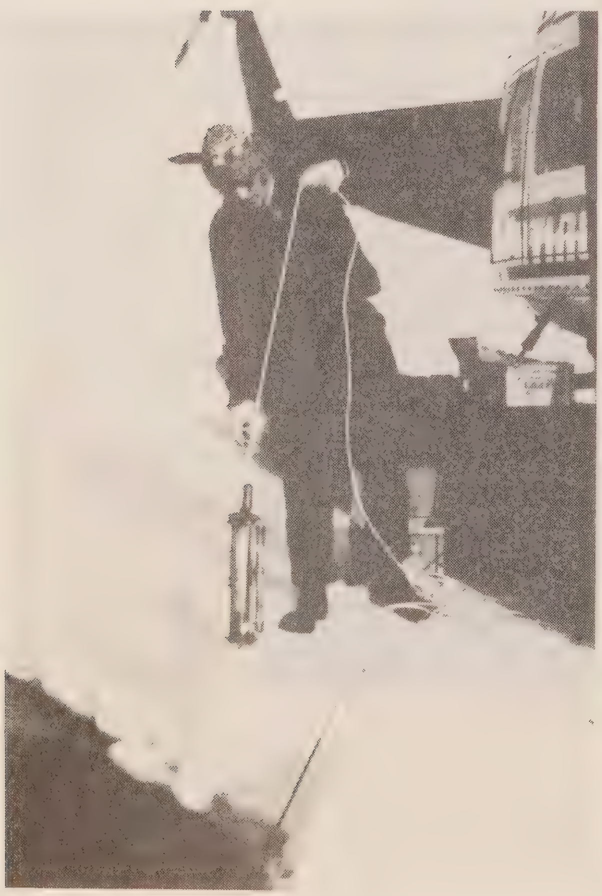

Figure 7 Taking a bottle cast

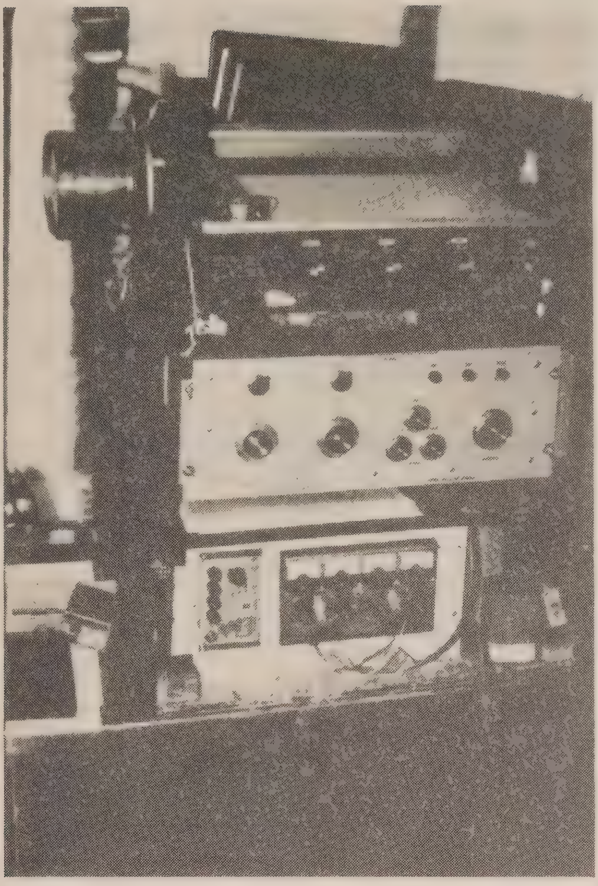

Figure 8 Guildline 8202 Arctic Probe with 8101 deck unit.

Figure 9 Hydroproducts 612S turbidity meter

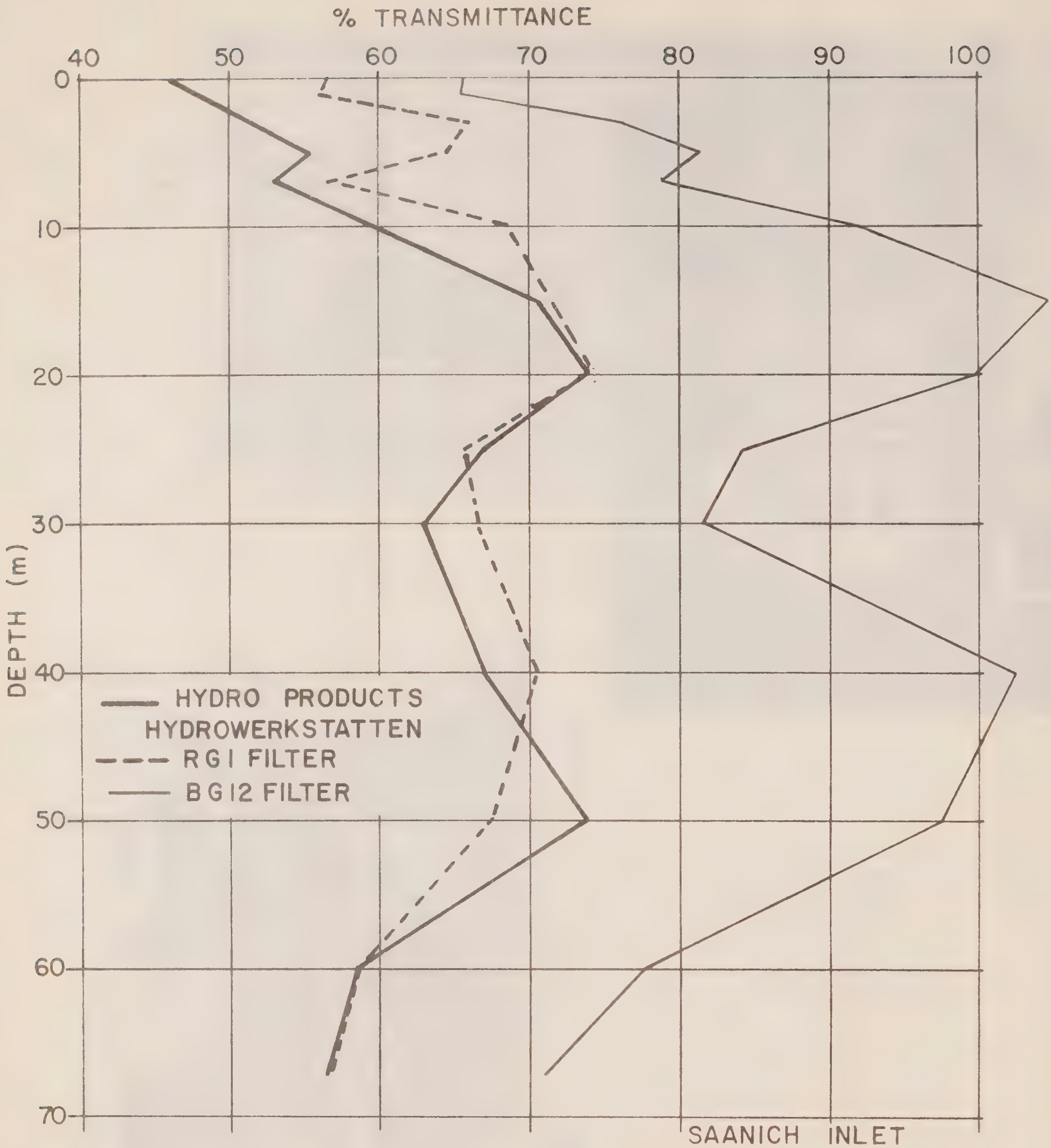

Figure 10 A comparison graph of the two turbidity meters.

SUMMER 74-1 TABLE OF ALL OBSERVATIONS 1974, 1975

Station	Bottle Cast	In-situ Salinometer	CTD/STD Δ	Transmissiometer	Current*
1			1		
2			1		
3			1		
4			1		
5		1	1		
6			1		
7		1	1		
8			1		
9			1		
10			1		
11			58		2 profiles
12			1		
13			3		
14			2		
15			1		
16			2		
17			1		
18			1		
19			1		
20			1		
21			2		
22			1		
23			2		
24			1		
25			1	1	
26			1	1	
27			1	1	
28			1	1	
29			1	1	
36			1	137	
37			1	1	
38			1	1	
39			1	1	
40			3	3	6 surface
41			1	1	1 surface
42			1	1	
43			1	1	
44			1	1	
45			1	1	
46			1	1	
47			2	1	
48			1	1	
49			1	1	
50			1	1	
51			2	1	

* under separate cover

Δ CTD - conductivity, temperature, depth
STD - salinity,temperature, depth

Station	Bottle Cast	In-situ Salinometer	CTD/STD	Transmissiometer	Currents
SUMMER 74-1					
52			1		
53			1		
54			1	1	1 profile
55			2	1	
56			2	1	
57			2	1	
58			2	1	
59			1	1	
60			4	1	
61			1	1	
62			2	1	
63			1	1	
64			1		
65			1		
66			1		
SPRING 75-1					
1		2		1	2 near surface
2		1		1	1 " "
3		1		1	1 " "
4		1			1 " "
5		1			1 " "
A		12	2		36 surface
6		1			1 near surface
7		1			1 near surface
SPRING 75-2					
B	2	3	48	3	48 profiles
C	1	2	52	1	53 profiles
8		1			
9		1			
10		1			
11		1			
12		1			
13		1			
14		1			
15		1			
16		1			
17		1			
18		1			
19		1			
20		1			

Station	Bottle Cast	In-situ Salinometer	CTD/STD	Transmissiometer	Currents
SPRING 75-2					
21			1		
22			1		
23	1		1		
24	1		1		
25	1		1		
26	1		1	1	
27	1		1	1	
28			1	1	
29			1	1	
30	1		1	1	
31			1	1	
32			1	1	
33			1		
34			1		
35			1	1	
36			1	1	
37	1				
38				1	

SUMMER 75-3

Station	Bottle Cast	In-situ Salinometer	CTD/STD	Transmissiometer	Currents
Canmar Barge	2	14		10	9 profiles 2 surface

SUMMER 74-1

Transmissiometer

In-Situ Salinometer

STD Casts

Turbidity (% Transmittance)
Summer 74-1

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
1	11-08-74	1921	0	1	1
			2	1	1
			4	1	1
			6	1	1
			8	24	25
			10	32	41
			15	41	56
			20	48	69
			25	54	78
			30	59	92
			35	56	87
			40	41	59
25	22-08-74	1905	0	6	0
			1	6	0
			3	6	0
			5	7	0
			7	4	0
			10	47	17
			15	102	57
			20	110	68
			25	123	79
			30	131	90
			35	130	88
			40	108	68
			45	115	75
			50	115	76
			60	119	77
			65	121	80
26	22-08-74	2120	0	8	5
			1	8	5
			3	8	5
			5	9	5
			7	12	5
			10	34	30
			15	54	62
			20	60	74
			25	72	90
			30	77	97
			35	72	87
			40	60	101
			45	58	102

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
27	22-08-74	2240	0	0	2
			1	0	2
			3	0	2
			4	0	2
			5	0	2
			7	2	2
			9	4	2
			10	13	2
			15	43	41
			20	56	57
			25	56	64
			30	66	71
			35	63	72
			40	61	69
			45	55	60
28	23-08-74	0923	1	1	9
			3	4	7
			4	3	7
			5	3	7
			7	3	7
			8	3	7
			9	3	6
			10	3	6
			15	27	27
			20	37	45
			25	24	30
			30	32	36
29	23-08-74	1155	1	0	0
			3	0	0
			5	1	0
			7	9	0
			10	5	0
36	23-08-74	1630	1	0.5	0
			3	0	0
			5	0	0
			7	0	0
			10	2	2
37	23-08-74	1800	1	0	0
			3	0	0
			5	0	0
			7	0	0
			10	4	9
			15	40	66
			20	48	72
			25	48	70
			30	52	84
			35	44	66

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
38	23-08-74	2020	0	0	0
			1	0	0
			3	0	0
			5	2	1
			7	7	2
			10	28	35
			15	44	64
			20	59	98
			25	69	104
			30	65	100
			35	58	97
39	23-08-74	2155	0	0	0
			1	0	0
			3	0.5	0
			5	3	2
			7	25	23
			10	33	37
			15	44	56
			20	55	84
			25	54	84
			30	56	89
			35	44	66
40	24-08-74	0943	0	0	0
			1	0	0
			3	0	0
			5	7	0
			7	20	13
			10	25	25
			15	58	89
			20	54	87
			23	43	66
40	24-08-74	1119	0	0	8
			1	0	8
			3	0	8
			5	0	8
			7	19	25
			10	21	34
			15	60	91
			20	52	78
			23	48	73

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
40	24-08-74	1404	0	0	0
			1	0	0
			3	0	0
			5	0	0
			7	19	22
			10	31	32
			15	58	89
			20	53	81
			23	46	63
41	25-08-74	0843	0	0	8
			1	0	8
			3	0	9
			5	0	9
			7	0	9
			9	0	9
42	25-08-74	1135	0	0	0
			1	0	0
			3	0	0
			5	0	0
			7	0	0
			10	3	2
			15	10	8
			20	3	3
43	26-08-74	0742	0	0	0
			1	0	0
			3	0	0
			5	0	0
			7	0	0
			10	43	57
			15	50	69
			17	59	91
			20	23	27
			22	23	29
44	26-08-74	1122	0	0	0
			1	0	0
			3	0	0
			5	0	0
			7	22	19
			10	25	25
			15	12	9

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
45	26-08-74	1430	0	0	0
			1	0	0
			3	0	0
			5	1	0
			7	17	14
			10	32	44
			15	39	57
			17	48	66
			20	14	10
46	26-08-74	1555	0	0	0
			1	0	0
			3	0	0
			5	0	0
			7	16	17
			10	40	61
			15	60	96
			20	12	13
			24	8	9
47	26-08-74	1850	0	0	0
			1	0	0
			3	0	0
			5	0	0
			7	42	55
			10	54	82
			15	61	99
			20	61	100
			25	67	113
			30	28	36
48	26-08-74	2035	0	0	0
			1	0	0
			3	0	0
			5	12	9
			7	58	91
			10	67	117
			15	64	114
			20	73	137
			25	53	99
			30	24	33
			33	23	30

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
49	26-08-74	2213	0	0	0
			1	0	0
			3	0	0
			5	20	11
			7	59	90
			10	66	104
			15	68	111
			20	70	118
			25	70	116
			30	39	56
			35	31	40
			39	16	19
50	27-08-74	0927	0	0	0
			1	0	0
			3	2	0
			5	43	12
			7	76	158
			10	80	160
			15	81	172
			20	83	184
			25	81	110
			30	50	75
			35	33	41
			39	0	19
51	27-08-74	1242	0	0	0
			1	0	0
			3	0	0
			5	0	3
			7	61	87
			10	78	138
			15	83	160
			20	85	159
			25	90	171
			30	42	72
			35	15	17
54	29-08-74	0006	0	0	4
			1	0	4
			3	0	4
			5	9	4
			7	68	84
			10	84	120
			15	90	137
			20	94	143
			25	95	146
			30	95	147
			35	95	146
			40	95	147
			45	76	116
			50	40	63
			53	33	42

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
55	30-08-74	0015	0	4	9
			1	4	9
			3	5	9
			5	31	9
			7	40	33
			10	58	60
			15	66	90
			20	82	114
			25	87	138
			30	84	130
			35	62	98
			40	33	48
			42	32	48
56	30-08-74	0853	0	0	0
			1	0	0
			3	0	1
			5	0	1
			7	4	7
			10	24	28
			15	43	59
			20	31	56
			22	16	18
57	30-08-74	1650	0	14	6
			1	12	6
			3	11	6
			5	46	51
			7	54	76
			10	61	100
			15	64	109
			20	69	129
			25	70	137
			30	74	143
			35	74	147
			40	70	143
			45	80	160
			50	62	111
			55	46	77
58	30-08-74	2350	0	6	3
			1	6	3
			3	14	5
			5	45	46
			7	49	66
			10	52	77
			15	59	98
			20	69	123
			25	75	141
			30	67	120
			35	47	77
			38	44	68

Station Number	Date	Time (GMT)	Depth (m)	BG1	BG12
59	31-08-74	0837	0	8	4
			1	8	5
			3	13	5
			5	18	7
			7	53	53
			10	55	60
			15	59	71
			20	61	85
			25	67	97
			30	64	89
			35	44	84
			39	30	64
60	31-08-74	2326	0	0	0
			1	0	0
			3	0	0
			5	9	1
			7	21	30
			10	36	49
			15	45	67
			20	51	81
			25	55	96
			30	62	110
			40	64	114
			50	70	126
			60	70	130
			65	70	130
61	01-09-74	1013	0	3	1
			1	4	1
			3	4	3
			5	5	6
			7	20	18
			10	33	45
			15	45	63
			20	51	84
			25	54	94
			30	54	89
			40	55	95
			50	59	103
			60	58	88

Station Number	Date	Time (GMT)	Depth (m)	RG1	BG12
62	01-09-74	1332	0	20	10
			1	20	11
			3	20	11
			5	38	40
			7	44	59
			10	57	82
			15	71	122
			20	73	129
			25	74	129
			29	63	103
63	01-09-74	1912	0	11	8
			1	11	8
			3	11	8
			5	10	6
			7	25	25
			10	27	37
			15	37	47
			20	41	69
			25	49	78
			30	49	80
			40	47	75
			50	40	61
			55	29	41

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Summer 1974

Station Number	Date	Time (GMT)	Depth (m)	Temp. (^{o}C)	Salinity ($^{0}/_{00}$)
5	13-08-74	1720	1	2.8	3.8
			3	2.8	3.9
			5	2.8	4.0
			6	2.7	4.0
			7	2.5	4.0
			8	2.2	4.4
			10	-0.7	28.1
7	14-08-74	0900	1	1.7	3.0
			3	1.7	3.2
			5	1.8	3.2
			6	1.9	3.3
			7	1.9	2.3
			8	0.4	23.3
			9	-0.6	26.3
			10	-1.0	27.0
			11	-1.2	27.3
			12	-1.3	26.2

The headings for the data listings are explained as follows:

PRESS	is pressure (decibars)
TEMP	is temperature (degrees Celsius)
SAL	is salinity (parts per thousand)
DEPTH	is reported in meters
SIGMA-T	is specific gravity anomaly
SVA	is specific volume anomaly
DELTA D	is geopotential anomaly (J/kg)
POT EN	is potential energy in units of 10^8 ergs/cm^2
SOUND VEL	is velocity of sound (meters per second)

REFERENCE NO. 74-1- 1 STN- BS01 DATE 12/ 8/74 GMT 0.3
POSITION 69-40.6N, 137-11.3W DEPTH 47

WIND DIR- 300 WAVE P/H - 0 AIR TEMP 1.1 WW
WIND SPD- 15 SWELL P/H WET BLB 1.0 CLD-A
SWELL D BARO 1021.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.90	2.54	0	2.05	2530.7	0.0	0.0	1429.
1	4.91	2.54	1	2.05	2530.9	0.25	0.00	1429.
3	4.87	2.54	3	2.06	2530.7	0.76	0.01	1429.
5	4.86	2.54	5	2.06	2530.6	1.27	0.03	1429.
7	-1.10	25.67	7	20.64	713.3	1.66	0.06	1431.
10	-1.30	28.62	10	23.02	485.5	1.82	0.07	1434.
15	-1.61	29.99	15	24.14	379.0	2.03	0.10	1435.
20	-1.64	30.66	20	24.68	326.8	2.21	0.13	1436.
30	-1.65	31.39	30	25.27	270.7	2.52	0.20	1437.

REFERENCE NO. 74-1- 2 STN- BS02 DATE 13/ 8/74 GMT 0.9
POSITION 70- 7.2N, 134-37.1W DEPTH 33

WIND DIR- 0 WAVE P/H 0/0 AIR TEMP 4.4 WW
WIND SPD- 0 SWELL P/H WET BLB 3.7 CLD-A
SWELL D BARO 1014.2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3.39	3.07	0	2.50	2486.4	0.0	0.0	1423.
1	3.38	3.07	1	2.50	2486.6	0.25	0.00	1423.
3	3.38	3.07	3	2.50	2486.5	0.75	0.01	1423.
5	3.31	3.07	5	2.50	2486.5	1.24	0.03	1422.
7	0.64	15.22	7	12.23	1527.9	1.72	0.06	1425.
10	-1.28	28.49	10	22.91	495.7	1.92	0.08	1434.
15	-1.50	29.36	15	23.63	427.4	2.14	0.11	1435.
20	-1.57	29.94	20	24.09	383.0	2.35	0.14	1435.

REFERENCE NO, 74-1- 3 STN- BS03 DATE 13/ 8/74 GMT 14,8
POSITION 69-48,9N, 133-17,9W DEPTH 15

WIND DIR- 360 WAVE P/H AIR TEMP -0,5 WW
WIND SPD- 11 SWELL P/H WET BLB -1,0 CLD-A
SWELL D BARO 1014,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0,89	2,84	0	2,26	2510,2	0,0	0,0	1410,
1	0,90	2,84	1	2,26	2510,2	0,25	0,00	1411,
3	0,90	2,84	3	2,26	2510,2	0,75	0,01	1411,
5	0,84	2,84	5	2,26	2510,3	1,26	0,03	1410,
7	0,82	2,84	7	2,26	2510,3	1,76	0,06	1410,

REFERENCE NO, 74-1- 4 STN- BS04 DATE 13/ 8/74 GMT 22,2
POSITION 69-52,8N, 133-43,3W DEPTH 15

WIND DIR- 300 WAVE P/H 0/.5 AIR TEMP -0,5 WW
WIND SPD- 12 SWELL P/H WET BLB -1,0 CLD-A
SWELL D BARO 1017,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,47	2,84	0	2,31	2505,1	0,0	0,0	1423,
1	3,46	2,84	1	2,31	2505,3	0,25	0,00	1423,
3	3,38	2,84	3	2,31	2505,2	0,75	0,01	1422,
5	2,72	2,84	5	2,31	2505,4	1,24	0,03	1419,
7	2,81	4,17	7	3,37	2399,4	1,74	0,06	1421,

REFERENCE NO. 74-1- 5 STN- BS05 DATE 13/ 8/74 GMT 23.3
POSITION 69-56.9N, 134- 7.5W DEPTH 17

WIND DIR- 300 WAVE P/H 0/.5 AIR TEMP -0.5 WW
WIND SPD- 16 SWELL P/H WET BLB -1.0 CLD-A
SWELL D BARO 1017.1

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3.12	2.84	0	2.31	2505.1	0.0	0.0	1421.
1	3.12	2.84	1	2.31	2505.3	0.25	0.00	1421.
3	3.09	2.84	3	2.31	2505.2	0.75	0.01	1421.
5	3.08	2.84	5	2.31	2505.2	1.25	0.03	1421.
7	2.60	2.84	7	2.31	2505.5	1.75	0.06	1419.
10	-1.00	27.38	10	22.02	581.4	2.08	0.09	1434.

REFERENCE NO. 74-1- 6 STN- BS06 DATE 14/ 8/74 GMT 3.3
POSITION 70- 7.7N, 134-20.0W DEPTH 35

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3.23	2.84	0	2.31	2505.1	0.0	0.0	1422.
1	3.22	2.84	1	2.31	2505.3	0.25	0.00	1422.
3	3.29	2.84	3	2.31	2505.2	0.75	0.01	1422.
5	3.35	2.84	5	2.31	2505.2	1.25	0.03	1422.
7	0.14	4.48	7	3.55	2381.6	1.75	0.06	1409.
10	-1.27	28.07	10	22.58	527.8	2.02	0.08	1434.
15	-1.48	29.32	15	23.60	430.6	2.26	0.11	1435.
20	-1.54	29.66	20	23.87	404.5	2.47	0.15	1435.

REFERENCE NO. 74-1- 7 STN- BS07 DATE 14/ 8/74 GMT 14.8
POSITION 70- 7.2N, 134-20.7W DEPTH 34

WIND DIR- 330 WAVE P/H 0/.5 AIR TEMP -3.5 WW
WIND SPD- 14 SWELL P/H WET BLB -3.5 CLD-A
SWELL D BARO 1015.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.03	2.84	0	2.30	2506.6	0.0	0.0	1416.
1	2.04	2.84	1	2.30	2506.7	0.25	0.00	1416.
3	2.04	2.84	3	2.30	2506.6	0.75	0.01	1416.
5	2.17	2.84	5	2.30	2506.3	1.25	0.03	1417.
7	0.85	13.50	7	10.85	1662.7	1.73	0.06	1424.
10	-1.24	27.97	10	22.50	535.4	1.97	0.08	1434.
15	-1.46	29.01	15	23.34	455.2	2.21	0.11	1434.
20	-1.55	29.59	20	23.81	410.0	2.43	0.15	1435.

REFERENCE NO. 74-1- 8 STN- BS08 DATE 15/ 8/74 GMT 2.2
POSITION 70- 8.2N, 134-15.0W DEPTH 35

WIND DIR- 330 WAVE P/H 0/.2 AIR TEMP -2.0 WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.34	2.84	0	2.28	2508.5	0.0	0.0	1413.
1	1.35	2.84	1	2.28	2508.6	0.25	0.00	1413.
3	1.29	2.84	3	2.28	2508.7	0.75	0.01	1412.
5	1.37	2.84	5	2.28	2508.3	1.24	0.03	1413.
7	1.65	2.84	7	2.29	2507.4	1.75	0.06	1414.
10	-1.25	27.80	10	22.36	548.9	2.05	0.09	1434.
15	-1.47	29.06	15	23.38	451.0	2.30	0.12	1434.
20	-1.54	29.71	20	23.91	400.4	2.51	0.16	1435.
30	-1.57	30.86	30	24.84	311.8	2.86	0.24	1437.

REFERENCE NO. 74-1- 9 STN- BS09 DATE 15/ 8/74 GMT 14.9
POSITION 70- 4.5N, 134-18.8W DEPTH 28

WIND DIR- 300 WAVE P/H 0/.2 AIR TEMP -3.5 WW
WIND SPD- 08 SWELL P/H WET BLB -3.5 CLD-A
SWELL D BARO 1016.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.76	2.84	0	2.29	2507.2	0.0	0.0	1415.
1	1.76	2.84	1	2.29	2507.4	0.25	0.00	1415.
3	1.76	2.84	3	2.29	2507.3	0.75	0.01	1415.
5	1.75	2.84	5	2.29	2507.2	1.25	0.03	1415.
7	1.55	2.84	7	2.28	2507.7	1.76	0.06	1414.
10	-1.09	27.10	10	21.79	603.1	2.15	0.09	1433.
15	-1.45	29.01	15	23.34	455.2	2.40	0.13	1434.
20	-1.52	29.53	20	23.76	414.8	2.62	0.16	1435.

REFERENCE NO. 74-1- 10 STN- BS10 DATE 15/ 8/74 GMT 24.0
POSITION 69-40.4N, 137- 8.8W DEPTH 17

WIND DIR- 300 WAVE P/H 0/.2 AIR TEMP 0.8 WW
WIND SPD- 10 SWELL P/H WET BLB 00.2 CLD-A 3
SWELL D BARO 1016.8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.94	2.54	0	1.98	2538.4	0.0	0.0	1438.
1	6.82	2.54	1	1.98	2537.9	0.25	0.00	1437.
3	6.40	2.54	3	2.00	2535.9	0.76	0.01	1435.
5	6.22	2.54	5	2.01	2535.0	1.27	0.03	1435.
7	3.58	3.40	7	2.76	2460.4	1.77	0.06	1424.
10	-1.06	27.36	10	22.00	583.0	2.08	0.09	1434.

REFERENCE NO. 74-1- 11   STN- BS11   DATE 16/ 8/74   GMT 5.4
POSITION 69-36.0N, 137-41.5W   DEPTH 65

WIND DIR- 355   WAVE P/H 0 .5   AIR TEMP 3.7   WW
WIND SPD- 07   SWELL P/H   WET BLB 2.9   CLD-A 6
SWELL D   BARO 1016.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.43	2.54	0	2.00	2535.9	0.0	0.0	1436.
1	6.66	2.54	1	1.99	2537.1	0.25	0.00	1437.
3	5.34	2.54	3	2.04	2531.9	0.76	0.01	1431.
5	3.78	2.54	5	2.07	2529.1	1.27	0.03	1424.
7	1.43	12.54	7	10.08	1738.1	1.73	0.06	1426.
10	-1.33	28.41	10	22.85	501.5	1.98	0.08	1434.
15	-1.59	30.05	15	24.19	374.3	2.19	0.11	1435.
20	-1.65	30.97	20	24.93	303.6	2.36	0.14	1436.
30	-1.58	31.61	30	25.45	254.0	2.64	0.21	1438.
50	-1.50	32.11	50	25.85	215.5	3.09	0.39	1439.

REFERENCE NO. 74-1- 12   STN- BS11   DATE 16/ 8/74   GMT 6.2
POSITION 69-36.0N, 137-41.5W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.93	2.54	0	1.98	2538.3	0.0	0.0	1438.
1	7.18	2.54	1	1.96	2539.9	0.25	0.00	1439.
3	5.37	2.54	3	2.04	2532.0	0.76	0.01	1431.
5	3.96	3.26	5	2.64	2472.0	1.26	0.03	1426.
7	1.33	15.03	7	12.07	1543.4	1.71	0.06	1428.
10	-1.33	28.31	10	22.78	508.7	1.93	0.08	1434.
15	-1.57	30.14	15	24.26	367.0	2.14	0.10	1435.
20	-1.64	31.03	20	24.98	298.8	2.30	0.13	1436.
30	-1.57	31.67	30	25.50	249.2	2.58	0.20	1438.
50	-1.49	32.08	50	25.83	217.9	3.03	0.38	1439.

REFERENCE NO. 74-1- 13 STN- BS11 DATE 16/ 8/74 GMT 7.1
POSITION 69-36.0N, 137-41.5W DEPTH 65

WIND DIR- 330 WAVE P/H 0 .5 AIR TEMP 3.0 WW
WIND SPD- 05 SWELL P/H WET BLB 2.2 CLD-A 7
SWELL D BARO 1016.8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.75	2.54	0	1.99	2537.4	0.0	0.0	1437.
1	6.34	2.54	1	2.01	2535.7	0.25	0.00	1435.
3	5.34	2.54	3	2.04	2531.9	0.76	0.01	1431.
5	4.02	3.77	5	3.05	2431.7	1.26	0.03	1426.
7	1.17	10.68	7	8.58	1884.7	1.72	0.06	1422.
10	-1.42	28.36	10	22.81	505.5	1.97	0.08	1434.
15	-1.57	30.05	15	24.19	374.3	2.18	0.11	1435.
20	-1.63	31.02	20	24.97	299.6	2.35	0.14	1436.
30	-1.56	31.61	30	25.45	254.0	2.62	0.21	1438.
50	-1.49	32.08	50	25.83	217.9	3.07	0.39	1439.

REFERENCE NO. 74-1- 14 STN- BS11 DATE 16/ 8/74 GMT 8.4
POSITION 69-36.0N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.51	2.54	0	1.95	2541.6	0.0	0.0	1440.
1	7.22	2.54	1	1.96	2540.1	0.25	0.00	1439.
3	6.69	2.54	3	1.99	2537.3	0.76	0.01	1437.
5	4.06	3.41	5	2.76	2460.1	1.27	0.03	1426.
7	2.39	12.21	7	9.80	1765.0	1.69	0.06	1430.
10	-1.38	28.56	10	22.98	489.4	1.98	0.08	1434.
15	-1.56	30.08	15	24.21	372.0	2.18	0.11	1435.
20	-1.62	30.99	20	24.94	302.1	2.35	0.14	1436.
30	-1.60	31.58	30	25.42	256.3	2.62	0.21	1438.
50	-1.47	32.11	50	25.85	215.6	3.07	0.39	1439.

REFERENCE NO. 74-1- 15 STN- BS11 DATE 16/ 8/74 GMT 9.1
POSITION 69-35.9N, 137-41.6W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.20	2.54	0	1.96	2539.8	0.0	0.0	1439.
1	7.00	2.54	1	1.97	2538.9	0.25	0.00	1438.
3	5.78	2.54	3	2.03	2533.4	0.76	0.01	1433.
5	4.93	3.41	5	2.75	2461.8	1.27	0.03	1430.
7	2.10	13.37	7	10.74	1673.6	1.69	0.06	1430.
10	-1.36	28.67	10	23.06	481.4	1.95	0.08	1434.
15	-1.59	30.27	15	24.36	357.4	2.15	0.10	1436.
20	-1.62	30.87	20	24.85	310.9	2.32	0.13	1436.
30	-1.61	31.49	30	25.35	263.5	2.60	0.21	1437.
50	-1.48	32.14	50	25.88	213.1	3.05	0.39	1439.

REFERENCE NO. 74-1- 16 STN- BS11 DATE 16/ 8/74 GMT 10.1
POSITION 69-35.9N, 137-41.6W DEPTH 65

WIND DIR- 315	WAVE P/H	AIR TEMP .	WW
WIND SPD- 08	SWELL P/H	WET BLB .	CLD-A
	SWELL D	BARO 1017.0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.19	2.54	0	1.96	2539.7	0.0	0.0	1439.
1	6.89	2.54	1	1.98	2538.4	0.25	0.00	1438.
3	5.76	2.54	3	2.03	2533.3	0.76	0.01	1433.
5	4.25	3.41	5	2.76	2460.4	1.27	0.03	1427.
7	1.86	12.98	7	10.42	1704.1	1.69	0.06	1428.
10	-1.37	28.39	10	22.84	503.1	1.97	0.08	1434.
15	-1.58	30.24	15	24.34	359.9	2.17	0.11	1436.
20	-1.63	30.91	20	24.89	307.6	2.33	0.14	1436.
30	-1.61	31.52	30	25.37	261.0	2.62	0.21	1437.
50	-1.48	32.11	50	25.85	215.6	3.07	0.39	1439.

REFERENCE NO. 74-1- 17 STN- BS11 DATE 16/ 8/74 GMT 11.0
POSITION 69-35.8N, 137-41.6W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.30	2.54	0	1.96	2540.4	0.0	0.0	1439.
1	7.26	2.54	1	1.96	2540.3	0.25	0.00	1439.
3	5.64	2.54	3	2.03	2532.9	0.76	0.01	1432.
5	3.66	3.41	5	2.77	2459.7	1.27	0.03	1424.
7	1.38	12.59	7	10.12	1734.0	1.70	0.06	1426.
10	-1.30	27.82	10	22.37	547.3	1.96	0.08	1433.
15	-1.60	30.18	15	24.29	364.7	2.18	0.11	1435.
20	-1.63	30.94	20	24.90	306.1	2.34	0.14	1436.
30	-1.63	31.52	30	25.37	261.0	2.62	0.21	1437.
50	-1.48	32.14	50	25.88	213.1	3.08	0.39	1439.

REFERENCE NO. 74-1- 18 STN- BS11 DATE 16/ 8/74 GMT 12.1
POSITION 69-35.7N, 137-41.5W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.21	2.54	0	1.96	2539.9	0.0	0.0	1439.
1	7.08	2.54	1	1.97	2539.3	0.25	0.00	1438.
3	6.01	2.54	3	2.02	2534.2	0.76	0.01	1434.
5	4.00	3.12	5	2.53	2483.2	1.26	0.03	1426.
7	1.94	8.52	7	6.85	2055.0	1.75	0.06	1423.
10	-1.30	28.24	10	22.72	514.4	2.02	0.08	1434.
15	-1.61	30.36	15	24.44	350.1	2.22	0.11	1436.
20	-1.63	30.88	20	24.86	310.0	2.38	0.14	1436.
30	-1.64	31.49	30	25.35	263.4	2.66	0.21	1437.
50	-1.48	32.11	50	25.85	215.6	3.12	0.39	1439.

REFERENCE NO. 74-1- 19 STN- BS11 DATE 16/ 8/74 GMT 12.5
POSITION 69-35.6N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.20	2.54	0	1.96	2539.8	0.0	0.0	1439.
1	6.98	2.54	1	1.98	2538.8	0.25	0.00	1438.
3	6.46	2.54	3	2.00	2536.1	0.76	0.01	1436.
5	3.74	3.26	5	2.65	2471.8	1.26	0.03	1425.
7	1.16	9.66	7	7.76	1965.1	1.74	0.06	1421.
10	-1.32	28.13	10	22.63	523.2	2.01	0.08	1434.
15	-1.59	30.18	15	24.29	364.7	2.22	0.11	1435.
20	-1.63	30.88	20	24.86	310.0	2.39	0.14	1436.
30	-1.63	31.49	30	25.35	263.5	2.67	0.21	1437.
50	-1.48	32.16	50	25.89	211.6	3.12	0.39	1439.

REFERENCE NO. 74-1- 20 STN- BS11 DATE 16/ 8/74 GMT 12.7
POSITION 69-35.6N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.21	2.54	0	1.96	2539.9	0.0	0.0	1439.
1	6.73	2.54	1	1.99	2537.5	0.25	0.00	1437.
3	6.51	2.54	3	2.00	2536.3	0.76	0.01	1436.
5	3.88	3.26	5	2.65	2471.9	1.26	0.03	1425.
7	1.52	11.08	7	8.91	1852.5	1.74	0.06	1424.
10	-1.33	28.34	10	22.79	507.2	2.02	0.08	1434.
15	-1.58	30.11	15	24.24	369.5	2.23	0.11	1435.

REFERENCE NO. 74-1- 21   STN- BS11   DATE 16/ 8/74   GMT 13.1
POSITION 69-35.5N, 137-41.4W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.28	2.54	0	1.96	2540.3	0.0	0.0	1439.
1	7.16	2.54	1	1.97	2539.8	0.25	0.00	1439.
3	6.53	2.54	3	2.00	2536.4	0.76	0.01	1436.
5	4.24	3.77	5	3.05	2432.0	1.26	0.03	1427.
7	1.79	8.92	7	7.18	2023.0	1.73	0.06	1423.
10	-1.21	27.96	10	22.49	536.2	2.02	0.08	1434.
15	-1.58	30.05	15	24.19	374.3	2.23	0.11	1435.
20	-1.63	30.89	20	24.87	309.2	2.40	0.14	1436.
30	-1.62	31.49	30	25.35	263.5	2.68	0.21	1437.
50	-1.48	32.13	50	25.87	214.0	3.14	0.40	1439.

REFERENCE NO. 74-1- 22   STN- BS11   DATE 16/ 8/74   GMT 14.0
POSITION 69-35.5N, 137-41.4W   DEPTH 65

WIND DIR- 330   WAVE P/H   AIR TEMP .   WW
WIND SPD- 02   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.09	2.54	0	1.97	2539.1	0.0	0.0	1438.
1	7.03	2.54	1	1.97	2539.0	0.25	0.00	1438.
3	6.52	2.54	3	2.00	2536.4	0.76	0.01	1436.
5	3.81	3.77	5	3.05	2431.5	1.26	0.03	1425.
7	1.31	9.80	7	7.88	1954.4	1.73	0.06	1422.
10	-1.25	28.14	10	22.63	522.5	1.99	0.08	1434.
15	-1.57	29.99	15	24.14	379.1	2.20	0.11	1435.
20	-1.62	30.92	20	24.89	306.9	2.37	0.14	1436.
30	-1.63	31.46	30	25.32	265.8	2.66	0.21	1437.
50	-1.48	32.16	50	25.89	211.6	3.11	0.39	1439.

REFERENCE NO, 74-1- 23 STN- BS11 DATE 16/ 8/74 GMT 15,1
POSITION 69-35,4N, 137-41,4W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,05	2,54	0	1,97	2539,0	0,0	0,0	1438,
1	7,05	2,54	1	1,97	2539,1	0,25	0,00	1438,
3	7,05	2,54	3	1,97	2539,1	0,76	0,01	1438,
5	4,00	3,77	5	3,05	2431,7	1,26	0,03	1426,
7	1,67	9,59	7	7,71	1970,5	1,73	0,06	1423,
10	-1,24	27,99	10	22,52	533,7	2,01	0,08	1434,
15	-1,57	30,02	15	24,16	376,7	2,22	0,11	1435,
20	-1,62	30,99	20	24,94	302,1	2,39	0,14	1436,
30	-1,62	31,49	30	25,35	263,5	2,67	0,21	1437,
50	-1,49	32,11	50	25,85	215,6	3,13	0,40	1439,

REFERENCE NO, 74-1- 24 STN- BS11 DATE 16/ 8/74 GMT 16,1
POSITION 69-35,3N, 137-41,4W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,39	2,54	0	1,95	2540,9	0,0	0,0	1440,
1	7,39	2,54	1	1,95	2541,0	0,25	0,00	1440,
3	7,40	2,54	3	1,95	2541,1	0,76	0,01	1440,
5	4,04	3,77	5	3,05	2431,7	1,26	0,03	1427,
7	1,36	10,04	7	8,08	1934,6	1,73	0,06	1422,
10	-1,19	27,60	10	22,20	564,4	2,00	0,08	1434,
15	-1,60	30,11	15	24,24	369,5	2,22	0,11	1435,
20	-1,65	31,02	20	24,97	299,6	2,38	0,14	1436,
30	-1,62	31,52	30	25,37	261,0	2,66	0,21	1437,
50	-1,49	32,12	50	25,86	214,8	3,12	0,40	1439,

REFERENCE NO. 74-1- 25   STN- BS11   DATE 16/ 8/74   GMT 17.0
POSITION 69-35.2N, 137-41.3W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.83	2.54	0	1.98	2537.8	0.0	0.0	1437.
1	6.85	2.54	1	1.98	2538.1	0.25	0.00	1437.
3	6.87	2.54	3	1.98	2538.1	0.76	0.01	1438.
5	4.39	3.77	5	3.04	2432.2	1.26	0.03	1428.
7	1.39	9.85	7	7.92	1950.1	1.73	0.06	1422.
10	-1.20	27.95	10	22.48	537.0	2.00	0.08	1434.
15	-1.59	30.11	15	24.24	369.5	2.21	0.11	1435.
20	-1.63	30.98	20	24.94	302.8	2.38	0.14	1436.
30	-1.61	31.58	30	25.42	256.2	2.66	0.21	1437.
50	-1.46	32.16	50	25.89	211.6	3.12	0.39	1439.

REFERENCE NO. 74-1- 26   STN- BS11   DATE 16/ 8/74   GMT 18.0
POSITION 69-35.2N, 137-41.3W   DEPTH 65

WIND DIR- 315   WAVE P/H   AIR TEMP .   WW
WIND SPD- 12   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.88	2.54	0	1.98	2538.1	0.0	0.0	1438.
1	6.86	2.54	1	1.98	2538.2	0.25	0.00	1437.
3	6.83	2.54	3	1.98	2537.9	0.76	0.01	1437.
5	4.72	2.56	5	2.07	2529.1	1.27	0.03	1428.
7	1.91	7.91	7	6.37	2102.7	1.77	0.06	1422.
10	-1.12	27.70	10	22.28	556.4	2.05	0.09	1434.
15	-1.56	30.02	15	24.16	376.8	2.27	0.11	1435.
20	-1.63	30.91	20	24.89	307.6	2.43	0.14	1436.
30	-1.61	31.55	30	25.40	258.7	2.72	0.21	1437.
50	-1.46	32.17	50	25.90	210.8	3.18	0.40	1439.

REFERENCE NO. 74-1- 27 STN- BS11 DATE 16/ 8/74 GMT 19.0
POSITION 69-35.3N, 137-41.3W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.06	2.85	0	2.22	2514.6	0.0	0.0	1439.
1	7.06	2.85	1	2.21	2515.2	0.25	0.00	1439.
3	6.71	2.80	3	2.19	2516.9	0.75	0.01	1437.
5	4.62	3.91	5	3.15	2421.7	1.25	0.03	1429.
7	1.76	8.77	7	7.05	2035.3	1.72	0.06	1422.
10	-1.23	27.75	10	22.32	552.2	2.01	0.08	1434.
15	-1.59	30.14	15	24.26	367.0	2.23	0.11	1435.
20	-1.64	30.95	20	24.91	305.2	2.40	0.14	1436.
30	-1.63	31.46	30	25.32	265.8	2.68	0.21	1437.
50	-1.47	32.16	50	25.89	211.6	3.14	0.40	1439.

REFERENCE NO. 74-1- 28 STN- BS11 DATE 16/ 8/74 GMT 20.1
POSITION 69-35.5N, 137-41.4W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.12	2.54	0	1.97	2539.3	0.0	0.0	1439.
1	7.12	2.54	1	1.97	2539.5	0.25	0.00	1439.
3	6.13	2.54	3	2.02	2534.7	0.76	0.01	1434.
5	4.61	3.41	5	2.75	2461.1	1.27	0.03	1429.
7	1.72	12.76	7	10.25	1721.1	1.69	0.06	1427.
10	-1.28	27.84	10	22.39	545.8	1.98	0.08	1434.
15	-1.57	30.05	15	24.19	374.3	2.20	0.11	1435.
20	-1.63	30.90	20	24.88	308.4	2.36	0.14	1436.
30	-1.62	31.52	30	25.37	261.0	2.65	0.21	1437.
50	-1.44	32.20	50	25.93	208.4	3.11	0.40	1440.

REFERENCE NO, 74-1- 29 STN- BS11 DATE 16/ 8/74 GMT 21.1
POSITION 69-35.7N, 137-41.4W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.67	2.54	0	1.94	2542.6	0.0	0.0	1441.
1	7.48	2.54	1	1.95	2541.6	0.25	0.00	1440.
3	6.74	2.54	3	1.99	2537.5	0.76	0.01	1437.
5	4.25	2.54	5	2.07	2529.6	1.27	0.03	1426.
7	1.81	6.93	7	5.58	2181.1	1.77	0.06	1420.
10	-1.26	28.07	10	22.58	528.1	2.05	0.09	1434.
15	-1.56	29.90	15	24.06	386.3	2.27	0.11	1435.
20	-1.62	30.83	20	24.82	314.0	2.44	0.14	1436.
30	-1.63	31.39	30	25.27	270.7	2.73	0.22	1437.
50	-1.44	32.17	50	25.90	210.9	3.20	0.41	1439.

REFERENCE NO, 74-1- 30 STN- BS11 DATE 16/ 8/74 GMT 22.1
POSITION 69-35.9N, 137-41.6W DEPTH 65

WIND DIR- 290	WAVE P/H	AIR TEMP	.	WW
WIND SPD- 12	SWELL P/H	WET BLB	.	CLD-A
	SWELL D	BARO	1017.0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.37	2.84	0	2.19	2517.3	0.0	0.0	1440.
1	7.31	2.83	1	2.18	2518.1	0.25	0.00	1440.
3	6.54	2.80	3	2.20	2516.0	0.76	0.01	1436.
5	4.66	4.40	5	3.54	2383.1	1.25	0.03	1430.
7	1.54	10.19	7	8.19	1923.0	1.70	0.06	1423.
10	-1.25	28.00	10	22.52	533.0	1.97	0.08	1434.
15	-1.55	29.90	15	24.06	386.4	2.18	0.11	1435.
20	-1.63	30.92	20	24.89	306.8	2.35	0.14	1436.
30	-1.63	31.49	30	25.35	263.5	2.64	0.21	1437.
50	-1.44	32.24	50	25.95	206.1	3.09	0.39	1440.

REFERENCE NO, 74-1- 31 STN- BS11 DATE 16/ 8/74 GMT 23,1
POSITION 69-35,9N, 137-41,6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,31	2,84	0	2,19	2516,9	0,0	0,0	1440,
1	6,72	2,83	1	2,22	2514,9	0,25	0,00	1437,
3	5,69	2,80	3	2,24	2512,5	0,75	0,01	1433,
5	4,28	4,40	5	3,55	2382,2	1,24	0,03	1428,
7	1,44	11,00	7	8,84	1859,1	1,70	0,06	1424,
10	-1,26	27,96	10	22,49	536,2	1,95	0,08	1434,
15	-1,54	29,90	15	24,06	386,4	2,18	0,11	1435,
20	-1,62	30,83	20	24,82	314,0	2,35	0,14	1436,
30	-1,63	31,42	30	25,30	268,3	2,64	0,21	1437,
50	-1,43	32,20	50	25,93	208,5	3,10	0,40	1440,

REFERENCE NO, 74-1- 32 STN- BS11 DATE 17/ 8/74 GMT 0,0
POSITION 69-35,9N, 137-41,6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,32	2,84	0	2,19	2516,9	0,0	0,0	1440,
1	7,23	2,83	1	2,19	2517,7	0,25	0,00	1439,
3	6,47	2,80	3	2,21	2515,7	0,76	0,01	1436,
5	4,45	4,40	5	3,54	2382,6	1,24	0,03	1429,
7	1,57	12,33	7	9,91	1754,4	1,69	0,06	1426,
10	-1,23	28,02	10	22,54	531,4	1,94	0,08	1434,
15	-1,53	29,86	15	24,03	388,8	2,17	0,11	1435,
20	-1,61	30,77	20	24,77	318,8	2,34	0,14	1436,
30	-1,63	31,46	30	25,32	265,8	2,63	0,21	1437,
50	-1,44	32,26	50	25,97	204,5	3,09	0,40	1440,

REFERENCE NO. 74-1- 33 STN- BS11 DATE 17/ 8/74 GMT 1.0
POSITION 69-35.8N, 137-41.6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.51	2.84	0	2.18	2518.1	0.0	0.0	1441.
1	7.51	2.83	1	2.17	2519.3	0.25	0.00	1441.
3	6.29	2.80	3	2.21	2515.0	0.76	0.01	1435.
5	4.99	4.70	5	3.77	2360.0	1.24	0.03	1432.
7	1.65	10.25	7	8.24	1918.0	1.70	0.06	1424.
10	-1.31	28.25	10	22.73	513.6	1.96	0.08	1434.
15	-1.53	29.77	15	23.96	396.0	2.18	0.11	1435.
20	-1.61	30.68	20	24.69	326.1	2.36	0.14	1436.
30	-1.62	31.49	30	25.35	263.5	2.64	0.21	1437.
50	-1.43	32.28	50	25.98	202.9	3.10	0.40	1440.

REFERENCE NO. 74-1- 34 STN- BS11 DATE 17/ 8/74 GMT 2.0
POSITION 69-35.8N, 137-41.6W DEPTH 65

WIND DIR- 290 WAVE P/H AIR TEMP . WW
WIND SPD- 06 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.42	2.84	0	2.19	2517.5	0.0	0.0	1440.
1	7.42	2.83	1	2.18	2518.7	0.25	0.00	1440.
3	6.82	2.80	3	2.19	2517.4	0.76	0.01	1438.
5	4.70	3.90	5	3.14	2422.7	1.25	0.03	1430.
7	1.92	9.68	7	7.79	1963.1	1.72	0.06	1424.
10	-1.36	28.47	10	22.90	496.7	1.98	0.08	1434.
15	-1.55	29.83	15	24.01	391.2	2.20	0.11	1435.
20	-1.63	30.70	20	24.71	324.5	2.38	0.14	1436.
30	-1.63	31.46	30	25.32	265.8	2.67	0.21	1437.
50	-1.45	32.27	50	25.98	203.6	3.13	0.40	1440.

REFERENCE NO. 74-1- 35   STN- BS11   DATE 17/ 8/74   GMT 3.1
POSITION 69-35.8N, 137-41.6W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.27	2.83	0	2.19	2517.4	0.0	0.0	1440.
1	7.27	2.82	1	2.18	2518.1	0.25	0.00	1440.
3	7.26	2.80	3	2.16	2519.9	0.76	0.01	1439.
5	6.08	3.90	5	3.09	2427.4	1.25	0.03	1436.
7	2.01	9.56	7	7.69	1973.0	1.72	0.06	1425.
10	-1.25	27.99	10	22.52	533.7	1.99	0.08	1434.
15	-1.54	29.90	15	24.06	386.4	2.21	0.11	1435.
20	-1.62	30.74	20	24.74	321.3	2.38	0.14	1436.
30	-1.62	31.46	30	25.32	265.8	2.67	0.21	1437.
50	-1.44	32.20	50	25.93	208.4	3.14	0.40	1440.

REFERENCE NO. 74-1- 36   STN- BS11   DATE 17/ 8/74   GMT 4.0
POSITION 69-35.8N, 137-41.6W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.26	2.84	0	2.20	2516.6	0.0	0.0	1439.
1	7.26	2.83	1	2.19	2517.8	0.25	0.00	1439.
3	7.25	2.80	3	2.17	2519.8	0.76	0.01	1439.
5	5.85	3.90	5	3.10	2426.4	1.25	0.03	1435.
7	2.26	10.14	7	8.15	1927.2	1.72	0.06	1426.
10	-1.27	28.01	10	22.53	532.1	1.98	0.08	1434.
15	-1.57	30.14	15	24.26	367.0	2.19	0.11	1435.
20	-1.62	30.81	20	24.80	315.7	2.36	0.14	1436.
30	-1.63	31.46	30	25.32	265.8	2.65	0.21	1437.
50	-1.44	32.24	50	25.95	206.1	3.12	0.40	1440.

REFERENCE NO, 74-1- 37 STN- BS11 DATE 17/ 8/74 GMT 6,3
POSITION 69-35,8N, 137-41,6W DEPTH 65

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 2 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1018,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,31	2,84	0	2,19	2516,9	0,0	0,0	1440,
1	7,31	2,83	1	2,18	2518,1	0,25	0,00	1440,
3	7,28	2,80	3	2,16	2520,0	0,76	0,01	1440,
5	4,42	3,87	5	3,12	2424,3	1,25	0,03	1428,
7	2,05	9,61	7	7,73	1968,8	1,72	0,06	1425,
10	-1,31	28,09	10	22,59	526,4	1,97	0,08	1434,
15	-1,53	29,90	15	24,06	386,4	2,20	0,11	1435,
20	-1,61	30,89	20	24,87	309,2	2,37	0,14	1436,
30	-1,61	31,52	30	25,37	261,0	2,65	0,21	1437,
50	-1,43	32,19	50	25,92	209,3	3,11	0,40	1440,

REFERENCE NO, 74-1- 38 STN- BS11 DATE 17/ 8/74 GMT 7,1
POSITION 69-35,8N, 137-41,6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,96	2,84	0	2,15	2521,0	0,0	0,0	1442,
1	7,96	2,84	1	2,15	2521,2	0,25	0,00	1442,
3	7,70	2,84	3	2,17	2519,4	0,76	0,01	1441,
5	4,37	3,92	5	3,16	2420,4	1,25	0,03	1428,
7	1,78	10,41	7	8,37	1905,8	1,72	0,06	1425,
10	-1,26	27,91	10	22,45	540,2	1,97	0,08	1434,
15	-1,54	29,96	15	24,11	381,6	2,19	0,11	1435,
20	-1,62	30,80	20	24,79	316,5	2,37	0,14	1436,
30	-1,63	31,46	30	25,32	265,8	2,65	0,21	1437,
50	-1,44	32,24	50	25,95	206,1	3,11	0,40	1440,

REFERENCE NO, 74-1- 39 STN- BS11 DATE 17/ 8/74 GMT 8.0
POSITION 69-35.8N, 137-41.6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.75	2.84	0	2.17	2519.6	0.0	0.0	1442.
1	7.77	2.84	1	2.17	2519.9	0.25	0.00	1442.
3	7.76	2.84	3	2.17	2519.8	0.76	0.01	1442.
5	4.26	3.92	5	3.17	2420.2	1.25	0.03	1428.
7	2.12	9.98	7	8.03	1939.4	1.71	0.06	1426.
10	-1.22	27.78	10	22.35	549.9	1.99	0.08	1434.
15	-1.55	29.99	15	24.13	379.1	2.21	0.11	1435.
20	-1.62	30.82	20	24.81	314.8	2.39	0.14	1436.
30	-1.63	31.52	30	25.37	261.0	2.67	0.21	1437.
50	-1.44	32.27	50	25.98	203.7	3.12	0.39	1440.

REFERENCE NO, 74-1- 40 STN- BS11 DATE 17/ 8/74 GMT 9.1
POSITION 69-35.9N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.74	2.84	0	2.17	2519.6	0.0	0.0	1442.
1	7.74	2.84	1	2.17	2519.8	0.25	0.00	1442.
3	7.75	2.84	3	2.17	2519.7	0.76	0.01	1442.
5	4.96	3.92	5	3.15	2421.7	1.25	0.03	1431.
7	1.49	9.71	7	7.81	1960.7	1.72	0.06	1422.
10	-1.25	27.88	10	22.42	542.6	1.98	0.08	1434.
15	-1.55	29.90	15	24.06	386.4	2.21	0.11	1435.
20	-1.62	30.79	20	24.78	317.2	2.38	0.14	1436.
30	-1.64	31.55	30	25.40	258.6	2.66	0.21	1437.
50	-1.44	32.27	50	25.98	203.6	3.11	0.39	1440.

REFERENCE NO. 74-1- 41   STN- BS11   DATE 17/ 8/74   GMT 9.3
POSITION 69-35.9N, 137-41.5W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.97	2.84	0	2.15	2521.0	0.0	0.0	1442.
1	7.97	2.84	1	2.15	2521.2	0.25	0.00	1442.
3	7.88	2.84	3	2.16	2520.6	0.76	0.01	1442.
5	4.24	2.84	5	2.31	2505.7	1.26	0.03	1426.
7	1.90	10.70	7	8.60	1882.9	1.74	0.06	1426.
10	-1.25	27.90	10	22.44	541.0	2.00	0.08	1434.
15	-1.55	29.90	15	24.06	386.4	2.23	0.11	1435.
20	-1.63	30.76	20	24.76	319.7	2.40	0.14	1436.
30	-1.63	31.49	30	25.35	263.5	2.69	0.21	1437.
50	-1.45	32.22	50	25.94	206.9	3.15	0.40	1439.

REFERENCE NO. 74-1- 42   STN- BS11   DATE 17/ 8/74   GMT 10.2
POSITION 69-36.1N, 137-41.5W   DEPTH 65

WIND DIR- 330   WAVE P/H   AIR TEMP .   WW
WIND SPD- 08   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	8.06	2.84	0	2.15	2521.7	0.0	0.0	1443.
1	8.07	2.84	1	2.14	2522.0	0.25	0.00	1443.
3	7.71	2.84	3	2.17	2519.5	0.76	0.01	1441.
5	4.23	3.42	5	2.77	2459.7	1.25	0.03	1427.
7	1.33	11.64	7	9.35	1809.2	1.72	0.06	1424.
10	-1.26	27.88	10	22.42	542.6	1.97	0.08	1434.
15	-1.55	29.93	15	24.08	383.9	2.19	0.11	1435.
20	-1.62	30.74	20	24.74	321.3	2.37	0.14	1436.
30	-1.63	31.49	30	25.35	263.5	2.65	0.21	1437.
50	-1.45	32.27	50	25.98	203.6	3.11	0.39	1440.

REFERENCE NO. 74-1- 43 STN- BS11 DATE 17/ 8/74 GMT 10.5
POSITION 69-36.1N, 137-41.5W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	8.08	2.84	0	2.14	2521.8	0.0	0.0	1443.
1	8.08	2.84	1	2.14	2522.0	0.25	0.00	1443.
3	7.77	2.84	3	2.16	2519.9	0.76	0.01	1442.
5	3.96	3.42	5	2.77	2459.3	1.25	0.03	1426.
7	1.51	10.23	7	8.23	1919.7	1.73	0.06	1423.
10	-1.23	27.85	10	22.40	545.0	1.98	0.08	1434.
15	-1.55	29.96	15	24.11	381.6	2.20	0.11	1435.
20	-1.61	30.77	20	24.77	318.8	2.38	0.14	1436.
30	-1.63	31.52	30	25.37	261.0	2.66	0.21	1437.
50	-1.46	32.27	50	25.98	203.6	3.11	0.39	1439.

REFERENCE NO. 74-1- 44 STN- BS11 DATE 17/ 8/74 GMT 11.2
POSITION 69-36.1N, 137-41.5W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.97	2.84	0	2.15	2521.0	0.0	0.0	1442.
1	7.98	2.84	1	2.15	2521.3	0.25	0.00	1443.
3	7.66	2.84	3	2.17	2519.1	0.76	0.01	1441.
5	3.60	4.42	5	3.57	2379.7	1.25	0.03	1425.
7	1.50	9.26	7	7.45	1996.0	1.71	0.06	1422.
10	-1.22	27.85	10	22.40	545.0	1.98	0.08	1434.
15	-1.53	29.83	15	24.01	391.2	2.21	0.11	1435.
20	-1.61	30.74	20	24.74	321.3	2.39	0.14	1436.
30	-1.63	31.52	30	25.37	261.0	2.67	0.21	1437.
50	-1.48	32.24	50	25.95	206.0	3.13	0.40	1439.

REFERENCE NO. 74-1- 45 STN- BS11 DATE 17/ 8/74 GMT 12.0
POSITION 69-36.0N, 137-41.5W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.83	2.84	0	2.16	2520.1	0.0	0.0	1442.
1	7.83	2.84	1	2.16	2520.3	0.25	0.00	1442.
3	7.84	2.84	3	2.16	2520.4	0.76	0.01	1442.
5	4.05	3.35	5	2.71	2465.3	1.25	0.03	1426.
7	1.36	12.13	7	9.75	1770.0	1.72	0.06	1425.
10	-1.30	28.24	10	22.72	514.4	1.95	0.08	1434.
15	-1.54	29.86	15	24.03	388.8	2.17	0.11	1435.
20	-1.59	30.58	20	24.62	333.3	2.35	0.14	1436.
30	-1.62	31.42	30	25.30	268.3	2.64	0.21	1437.
50	-1.47	32.26	50	25.97	204.4	3.10	0.40	1439.

REFERENCE NO. 74-1- 46 STN- BS11 DATE 17/ 8/74 GMT 13.0
POSITION 69-35.9N, 137-41.5W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.54	2.84	0	2.18	2518.2	0.0	0.0	1441.
1	7.54	2.84	1	2.18	2518.4	0.25	0.00	1441.
3	7.54	2.84	3	2.18	2518.4	0.76	0.01	1441.
5	6.03	6.27	5	4.97	2241.0	1.23	0.03	1438.
7	1.49	13.34	7	10.72	1675.3	1.65	0.06	1427.
10	-1.32	28.36	10	22.81	505.5	1.88	0.08	1434.
15	-1.55	29.93	15	24.08	383.9	2.09	0.10	1435.
20	-1.61	30.62	20	24.65	330.1	2.27	0.13	1436.
30	-1.63	31.46	30	25.32	265.8	2.56	0.21	1437.
50	-1.48	32.26	50	25.97	204.4	3.02	0.39	1439.

REFERENCE NO. 74-1- 47   STN- BS11   DATE 17/ 8/74   GMT 14.0
POSITION 69-35.8N, 137-41.5W   DEPTH 65

WIND DIR- 330   WAVE P/H   AIR TEMP 3.0   WW
WIND SPD- 12   SWELL P/H   WET BLB 2.1   CLD-A
SWELL D   BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.05	2.84	0	2.21	2515.4	0.0	0.0	1439.
1	7.05	2.84	1	2.21	2515.6	0.25	0.00	1439.
3	7.05	2.84	3	2.21	2515.5	0.75	0.01	1439.
5	6.34	5.52	5	4.36	2301.4	1.24	0.03	1439.
7	1.45	12.78	7	10.27	1719.3	1.67	0.06	1426.
10	-1.33	28.33	10	22.79	507.9	1.90	0.08	1434.
15	-1.56	29.90	15	24.06	386.3	2.11	0.10	1435.
20	-1.62	30.58	20	24.62	333.3	2.29	0.14	1436.
30	-1.64	31.46	30	25.32	265.8	2.58	0.21	1437.
50	-1.49	32.24	50	25.95	206.0	3.05	0.40	1439.

REFERENCE NO. 74-1- 48   STN- BS11   DATE 17/ 8/74   GMT 15.0
POSITION 69-35.8N, 137-41.5W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.23	2.84	0	2.20	2516.4	0.0	0.0	1439.
1	7.23	2.84	1	2.20	2516.6	0.25	0.00	1439.
3	7.23	2.84	3	2.20	2516.6	0.75	0.01	1439.
5	6.20	3.44	5	2.73	2463.8	1.25	0.03	1436.
7	2.25	8.60	7	6.92	2048.4	1.74	0.06	1424.
10	-1.31	28.38	10	22.83	504.0	2.00	0.08	1434.
15	-1.54	29.90	15	24.06	386.4	2.21	0.11	1435.
20	-1.61	30.57	20	24.61	334.1	2.39	0.14	1436.
30	-1.62	31.42	30	25.30	268.3	2.68	0.21	1437.
50	-1.47	32.21	50	25.93	207.6	3.14	0.40	1439.

REFERENCE NO. 74-1- 49 STN- BS11 DATE 17/ 8/74 GMT 16.0
POSITION 69-35.9N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.77	2.84	0	2.22	2513.9	0.0	0.0	1437.
1	6.76	2.84	1	2.22	2514.1	0.25	0.00	1437.
3	6.78	2.84	3	2.22	2514.1	0.75	0.01	1437.
5	6.46	4.61	5	3.64	2373.2	1.24	0.03	1438.
7	2.55	9.50	7	7.64	1977.3	1.70	0.06	1427.
10	-1.27	28.21	10	22.69	516.8	1.97	0.08	1434.
15	-1.54	29.90	15	24.06	386.4	2.18	0.11	1435.
20	-1.61	30.68	20	24.69	326.1	2.36	0.14	1436.
30	-1.62	31.39	30	25.27	270.7	2.65	0.21	1437.
50	-1.47	32.21	50	25.93	207.6	3.12	0.40	1439.

REFERENCE NO. 74-1- 50 STN- BS11 DATE 17/ 8/74 GMT 17.0
POSITION 69-36.0N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.80	2.84	0	2.22	2514.1	0.0	0.0	1438.
1	6.80	2.84	1	2.22	2514.3	0.25	0.00	1438.
3	6.85	2.84	3	2.22	2514.5	0.75	0.01	1438.
5	6.46	4.61	5	3.64	2373.2	1.24	0.03	1438.
7	2.86	7.98	7	6.42	2097.9	1.70	0.06	1426.
10	-1.33	28.30	10	22.77	509.6	2.00	0.08	1434.
15	-1.55	29.99	15	24.13	379.1	2.21	0.11	1435.
20	-1.61	30.70	20	24.71	324.5	2.39	0.14	1436.
30	-1.63	31.36	30	25.25	273.1	2.68	0.22	1437.
50	-1.48	32.17	50	25.90	210.8	3.16	0.41	1439.

REFERENCE NO. 74-1- 51 STN- BS11 DATE 17/ 8/74 GMT 18.0
POSITION 69-36.1N, 137-41.5W DEPTH 65

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 15 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.12	2.84	0	2.20	2515.8	0.0	0.0	1439.
1	7.12	2.84	1	2.20	2516.0	0.25	0.00	1439.
3	7.12	2.84	3	2.20	2515.9	0.75	0.01	1439.
5	7.11	3.33	5	2.59	2477.7	1.25	0.03	1439.
7	2.75	7.15	7	5.76	2162.7	1.74	0.06	1425.
10	-1.31	28.47	10	22.90	496.7	2.04	0.09	1434.
15	-1.55	29.93	15	24.08	383.9	2.25	0.11	1435.
20	-1.61	30.59	20	24.62	332.5	2.43	0.14	1436.
30	-1.62	31.36	30	25.25	273.1	2.73	0.22	1437.
50	-1.48	32.22	50	25.94	206.8	3.20	0.41	1439.

REFERENCE NO. 74-1- 52 STN- BS11 DATE 17/ 8/74 GMT 19.0
POSITION 69-36.1N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.27	2.84	0	2.20	2516.6	0.0	0.0	1440.
1	7.28	2.84	1	2.20	2516.9	0.25	0.00	1440.
3	7.27	2.84	3	2.20	2516.8	0.76	0.01	1440.
5	6.57	4.99	5	3.93	2344.4	1.24	0.03	1439.
7	2.76	9.32	7	7.49	1992.2	1.69	0.06	1428.
10	-1.30	28.27	10	22.74	512.0	1.98	0.08	1434.
15	-1.54	29.83	15	24.01	391.2	2.20	0.11	1435.
20	-1.62	30.69	20	24.70	325.3	2.38	0.14	1436.
30	-1.64	31.42	30	25.30	268.2	2.67	0.21	1437.
50	-1.49	32.24	50	25.95	206.0	3.13	0.40	1439.

REFERENCE NO. 74-1- 53   STN- BS11   DATE 17/ 8/74   GMT 20.0
POSITION 69-36.0N, 137-41.4W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.26	2.84	0	2.20	2516.6	0.0	0.0	1439.
1	7.26	2.84	1	2.20	2516.8	0.25	0.00	1440.
3	7.26	2.84	3	2.20	2516.8	0.76	0.01	1440.
5	5.61	4.42	5	3.53	2384.5	1.25	0.03	1434.
7	2.41	10.31	7	8.29	1913.5	1.70	0.06	1427.
10	-1.25	28.09	10	22.59	526.5	1.97	0.08	1434.
15	-1.55	29.99	15	24.13	379.1	2.19	0.11	1435.
20	-1.62	30.80	20	24.79	316.5	2.36	0.14	1436.
30	-1.64	31.42	30	25.30	268.2	2.65	0.21	1437.
50	-1.48	32.20	50	25.93	208.4	3.12	0.40	1439.

REFERENCE NO. 74-1- 54   STN- BS11   DATE 17/ 8/74   GMT 21.0
POSITION 69-35.9N, 137-41.3W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.33	2.84	0	2.19	2517.0	0.0	0.0	1440.
1	7.34	2.84	1	2.19	2517.3	0.25	0.00	1440.
3	7.34	2.84	3	2.19	2517.2	0.76	0.01	1440.
5	5.40	4.42	5	3.53	2383.8	1.25	0.03	1433.
7	1.88	11.09	7	8.92	1851.8	1.70	0.06	1426.
10	-1.16	27.72	10	22.30	554.8	1.96	0.08	1434.
15	-1.53	29.80	15	23.98	393.6	2.19	0.11	1435.
20	-1.61	30.70	20	24.71	324.5	2.37	0.14	1436.
30	-1.63	31.41	30	25.29	269.5	2.66	0.22	1437.
50	-1.47	32.24	50	25.95	206.0	3.12	0.40	1439.

REFERENCE NO, 74-1- 55   STN- BS11   DATE 17/ 8/74   GMT 22,0
POSITION 69-35,9N, 137-41,3W   DEPTH 65

WIND DIR- 315   WAVE P/H   AIR TEMP .   WW
WIND SPD- 18   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1017,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,27	2,54	0	1,96	2540,2	0,0	0,0	1439,
1	7,28	2,54	1	1,96	2540,5	0,25	0,00	1439,
3	7,27	2,54	3	1,96	2540,3	0,76	0,01	1439,
5	6,43	3,41	5	2,69	2467,3	1,27	0,03	1437,
7	2,21	11,71	7	9,41	1803,8	1,70	0,06	1428,
10	-1,16	27,69	10	22,27	557,2	1,97	0,08	1434,
15	-1,54	29,68	15	23,88	403,2	2,20	0,11	1435,
20	-1,63	30,60	20	24,63	331,6	2,39	0,14	1436,
30	-1,65	31,39	30	25,27	270,7	2,68	0,22	1437,
50	-1,49	32,22	50	25,94	206,8	3,15	0,40	1439,

REFERENCE NO, 74-1- 56   STN- BS11   DATE 17/ 8/74   GMT 23,0
POSITION 69-35,9N, 137-41,3W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,87	2,54	0	1,98	2538,0	0,0	0,0	1437,
1	6,87	2,54	1	1,98	2538,2	0,25	0,00	1437,
3	6,87	2,54	3	1,98	2538,1	0,76	0,01	1438,
5	6,03	3,41	5	2,71	2465,5	1,27	0,03	1435,
7	1,63	13,34	7	10,72	1675,4	1,69	0,06	1428,
10	-1,20	27,66	10	22,25	559,5	1,96	0,08	1434,
15	-1,54	29,71	15	23,91	400,9	2,19	0,11	1435,
20	-1,61	30,47	20	24,52	342,1	2,38	0,14	1436,
30	-1,64	31,42	30	25,30	268,2	2,67	0,22	1437,
50	-1,47	32,26	50	25,97	204,4	3,13	0,40	1439,

REFERENCE NO, 74-1- 57   STN- BS11   DATE 18/ 8/74   GMT 0,0
POSITION 69-35,9N, 137-41,4W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,49	2,84	0	2,24	2512,6	0,0	0,0	1436,
1	6,49	2,84	1	2,24	2512,7	0,25	0,00	1436,
3	6,51	2,84	3	2,24	2512,8	0,75	0,01	1436,
5	6,58	4,42	5	3,48	2389,0	1,24	0,03	1439,
7	2,21	9,23	7	7,43	1998,4	1,70	0,06	1425,
10	-1,21	27,52	10	22,14	569,9	2,01	0,08	1433,
15	-1,55	29,71	15	23,91	400,8	2,24	0,11	1435,
20	-1,60	30,33	20	24,41	352,5	2,43	0,15	1436,
30	-1,65	31,39	30	25,27	270,7	2,72	0,22	1437,
50	-1,46	32,22	50	25,94	206,8	3,19	0,41	1439,

REFERENCE NO, 74-1- 58   STN- BS11   DATE 18/ 8/74   GMT 1,1
POSITION 69-35,9N, 137-41,5W   DEPTH 65

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,11	2,54	0	2,02	2534,5	0,0	0,0	1434,
1	6,11	2,54	1	2,02	2534,7	0,25	0,00	1434,
3	6,11	2,54	3	2,02	2534,6	0,76	0,01	1434,
5	6,33	3,41	5	2,70	2466,9	1,27	0,03	1436,
7	2,72	12,99	7	10,42	1704,8	1,69	0,06	1432,
10	-1,11	27,36	10	22,00	582,9	1,98	0,08	1434,
15	-1,53	29,90	15	24,06	386,4	2,21	0,11	1435,
20	-1,59	30,34	20	24,42	351,8	2,39	0,14	1436,
30	-1,63	31,39	30	25,27	270,7	2,70	0,22	1437,
50	-1,44	32,24	50	25,95	206,1	3,17	0,41	1440,

REFERENCE NO, 74-1- 59 STN= BS11 DATE 18/ 8/74 GMT 2,0
POSITION 69-35,9N, 137-41,5W DEPTH 65

WIND DIR= 315 WAVE P/H AIR TEMP . WW
WIND SPD= 23 SWELL P/H WET BLB . CLD=A
SWELL D BARO 1018,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,76	2,54	0	2,03	2533,2	0,0	0,0	1433,
1	5,76	2,54	1	2,03	2533,3	0,25	0,00	1433,
3	5,77	2,54	3	2,03	2533,4	0,76	0,01	1433,
5	5,85	2,79	5	2,22	2514,1	1,27	0,03	1433,
7	3,29	6,18	7	4,98	2240,1	1,75	0,06	1426,
10	-1,16	27,50	10	22,12	571,6	2,08	0,09	1434,
15	-1,55	29,77	15	23,96	396,0	2,31	0,12	1435,
20	-1,61	30,49	20	24,54	340,5	2,49	0,15	1436,
30	-1,65	31,46	30	25,32	265,8	2,79	0,22	1437,
50	-1,47	32,27	50	25,98	203,6	3,26	0,41	1439,

REFERENCE NO, 74-1- 60 STN= BS11 DATE 18/ 8/74 GMT 3,0
POSITION 69-35,9N, 137-41,5W DEPTH 65

WIND DIR= WAVE P/H AIR TEMP WW
WIND SPD= SWELL P/H WET BLB CLD=A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,64	2,54	0	2,03	2532,8	0,0	0,0	1432,
1	5,64	2,54	1	2,03	2533,0	0,25	0,00	1432,
3	5,66	2,54	3	2,03	2533,0	0,76	0,01	1432,
5	5,75	2,79	5	2,23	2513,7	1,27	0,03	1433,
7	3,25	6,28	7	5,06	2231,9	1,75	0,06	1426,
10	-1,10	27,62	10	22,21	562,8	2,07	0,09	1434,
15	-1,54	29,74	15	23,93	398,4	2,31	0,12	1435,
20	-1,62	30,50	20	24,55	339,7	2,49	0,15	1436,
30	-1,64	31,42	30	25,30	268,2	2,79	0,22	1437,
50	-1,47	32,22	50	25,94	206,8	3,26	0,41	1439,

REFERENCE NO. 74-1- 61   STN- BS11   DATE 18/ 8/74   GMT 4.2
POSITION 69-36.0N, 137-41.6W   DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP		WW	
WIND SPD-	SWELL P/H	WET BLB		CLD-A	
	SWELL D	BARO			

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.61	2.54	0	2.03	2532.7	0.0	0.0	1432.
1	5.61	2.54	1	2.03	2532.9	0.25	0.00	1432.
3	5.63	2.54	3	2.03	2532.9	0.76	0.01	1432.
5	5.67	2.79	5	2.23	2513.5	1.27	0.03	1433.
7	3.71	5.18	7	4.18	2319.5	1.75	0.06	1427.
10	-1.23	28.12	10	22.62	524.1	2.11	0.09	1434.
15	-1.56	29.86	15	24.03	388.8	2.33	0.12	1435.
20	-1.62	30.63	20	24.66	329.3	2.51	0.15	1436.
30	-1.66	31.42	30	25.30	268.2	2.80	0.22	1437.
50	-1.46	32.26	50	25.97	204.4	3.27	0.41	1439.

REFERENCE NO. 74-1- 62   STN- BS11   DATE 18/ 8/74   GMT 5.0
POSITION 69-36.0N, 137-41.6W   DEPTH 65

WIND DIR- 315	WAVE P/H	AIR TEMP	.	WW	
WIND SPD- 15	SWELL P/H	WET BLB	.	CLD-A	
	SWELL D	BARO	0.0		

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.72	2.54	0	2.03	2533.1	0.0	0.0	1432.
1	5.73	2.54	1	2.03	2533.3	0.25	0.00	1433.
3	5.73	2.54	3	2.03	2533.2	0.76	0.01	1433.
5	5.66	2.79	5	2.23	2513.4	1.27	0.03	1433.
7	3.26	5.56	7	4.48	2289.4	1.75	0.06	1425.
10	-1.38	28.61	10	23.01	486.2	2.09	0.09	1434.
15	-1.56	29.90	15	24.06	386.3	2.30	0.12	1435.
20	-1.63	30.71	20	24.72	323.7	2.48	0.15	1436.
30	-1.66	31.42	30	25.30	268.2	2.77	0.22	1437.
50	-1.47	32.20	50	25.93	208.4	3.24	0.41	1439.

REFERENCE NO. 74-1- 63 STN- BS11 DATE 18/ 8/74 GMT 6.0
POSITION 69-36.1N, 137-41.6W DEPTH 65

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 08 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1019.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.38	2.54	0	2.04	2531.9	0.0	0.0	1431.
1	5.39	2.54	1	2.04	2532.2	0.25	0.00	1431.
3	5.39	2.54	3	2.04	2532.1	0.76	0.01	1431.
5	5.50	3.40	5	2.72	2464.7	1.26	0.03	1433.
7	3.39	4.26	7	3.44	2392.4	1.75	0.06	1424.
10	-1.37	28.34	10	22.80	507.1	2.13	0.09	1434.
15	-1.57	30.02	15	24.16	376.7	2.34	0.12	1435.
20	-1.62	30.83	20	24.82	314.0	2.51	0.15	1436.
30	-1.65	31.39	30	25.27	270.7	2.80	0.22	1437.
50	-1.48	32.11	50	25.85	215.6	3.29	0.42	1439.

REFERENCE NO. 74-1- 64 STN- BS11 DATE 18/ 8/74 GMT 7.1
POSITION 69-36.1N, 137-41.6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.09	2.54	0	2.05	2531.2	0.0	0.0	1430.
1	5.10	2.54	1	2.05	2531.3	0.25	0.00	1430.
3	5.15	2.54	3	2.05	2531.4	0.76	0.01	1430.
5	5.26	2.79	5	2.24	2512.1	1.27	0.03	1431.
7	2.93	5.67	7	4.58	2280.2	1.75	0.06	1424.
10	-1.25	27.87	10	22.42	543.4	2.13	0.09	1434.
15	-1.56	29.96	15	24.11	381.5	2.34	0.12	1435.
20	-1.62	30.89	20	24.87	309.2	2.52	0.15	1436.
30	-1.64	31.49	30	25.35	263.4	2.80	0.22	1437.
50	-1.48	32.17	50	25.90	210.8	3.27	0.41	1439.

REFERENCE NO. 74-1- 65 STN- BS11 DATE 18/ 8/74 GMT 8.0
POSITION 69-36.2N, 137-41.6W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.11	2.54	0	2.05	2531.2	0.0	0.0	1430.
1	5.12	2.54	1	2.05	2531.4	0.25	0.00	1430.
3	5.17	2.54	3	2.05	2531.5	0.76	0.01	1430.
5	5.83	2.79	5	2.22	2514.0	1.27	0.03	1433.
7	3.46	6.17	7	4.97	2241.2	1.75	0.06	1427.
10	-1.13	27.70	10	22.28	556.4	2.11	0.09	1434.
15	-1.55	29.83	15	24.01	391.2	2.34	0.12	1435.
20	-1.62	30.68	20	24.69	326.1	2.51	0.15	1436.
30	-1.64	31.36	30	25.25	273.0	2.81	0.23	1437.
50	-1.49	32.14	50	25.88	213.1	3.28	0.42	1439.

REFERENCE NO. 74-1- 66 STN- BS11 DATE 18/ 8/74 GMT 8.5
POSITION 69-36.3N, 137-41.5W DEPTH 65

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.21	2.54	0	2.05	2531.5	0.0	0.0	1430.
1	5.25	2.54	1	2.05	2531.7	0.25	0.00	1430.
3	5.31	2.54	3	2.04	2531.8	0.76	0.01	1431.
5	5.61	2.79	5	2.23	2513.3	1.27	0.03	1432.
7	3.99	5.54	7	4.46	2291.2	1.75	0.06	1429.
10	-1.14	27.70	10	22.28	556.3	2.13	0.09	1434.
15	-1.54	29.74	15	23.93	398.4	2.36	0.12	1435.
20	-1.63	30.69	20	24.70	325.3	2.54	0.15	1436.

REFERENCE NO. 74-1- 67 STN- BS11 DATE 18/ 8/74 GMT 9.0
POSITION 69-36.4N, 137-41.5W DEPTH 65

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.17	2.54	0	2.05	2531.4	0.0	0.0	1430.
1	5.18	2.54	1	2.05	2531.5	0.25	0.00	1430.
3	5.17	2.54	3	2.05	2531.5	0.76	0.01	1430.
5	5.39	2.79	5	2.24	2512.5	1.27	0.03	1431.
7	3.59	5.27	7	4.26	2312.0	1.75	0.06	1426.
10	-1.18	27.81	10	22.36	548.3	2.11	0.09	1434.
15	-1.55	29.86	15	24.03	388.8	2.33	0.12	1435.
20	-1.63	30.72	20	24.73	322.8	2.51	0.15	1436.
30	-1.64	31.42	30	25.30	268.2	2.80	0.22	1437.
50	-1.49	32.17	50	25.90	210.8	3.26	0.41	1439.

REFERENCE NO. 74-1- 68 STN- BS11 DATE 18/ 8/74 GMT 10.0
POSITION 69-36.5N, 137-41.5W DEPTH 65

WIND DIR- 315	WAVE P/H	AIR TEMP .	WW
WIND SPD- 4	SWELL P/H	WET BLB .	CLD-A
	SWELL D	BARO 1020.0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.30	2.54	0	2.04	2531.7	0.0	0.0	1431.
1	5.32	2.54	1	2.04	2531.9	0.25	0.00	1431.
3	5.42	2.54	3	2.04	2532.2	0.76	0.01	1431.
5	5.86	2.79	5	2.22	2514.1	1.27	0.03	1433.
7	3.71	5.28	7	4.26	2311.3	1.75	0.06	1427.
10	-1.15	27.73	10	22.31	554.0	2.12	0.09	1434.
15	-1.53	29.61	15	23.83	408.0	2.35	0.12	1435.
20	-1.63	30.68	20	24.69	326.0	2.54	0.15	1436.
30	-1.65	31.39	30	25.27	270.7	2.83	0.23	1437.
50	-1.49	32.17	50	25.90	210.8	3.29	0.41	1439.

REFERENCE NO, 74-1- 69 STN- BS12 DATE 18/ 8/74 GMT 15,9
POSITION 69-51,5N, 137-41,3W DEPTH 78

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 8 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1018,6

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,54	3,43	0	2,74	2462,2	0,0	0,0	1433,
1	5,53	3,44	1	2,75	2461,9	0,25	0,00	1433,
3	5,22	3,50	3	2,81	2455,7	0,74	0,01	1431,
5	4,94	3,89	5	3,12	2424,3	1,23	0,03	1431,
7	3,83	5,81	7	4,68	2270,0	1,70	0,06	1428,
10	-0,65	27,26	10	21,91	591,5	2,07	0,09	1436,
15	-1,51	29,99	15	24,13	379,4	2,30	0,12	1435,
20	-1,61	30,91	20	24,88	308,3	2,47	0,15	1436,
30	-1,60	31,63	30	25,46	252,4	2,74	0,22	1438,
50	-1,47	32,19	50	25,91	209,8	3,18	0,40	1439,
75	-1,47	32,32	75	26,02	199,4	3,69	0,72	1440,

REFERENCE NO, 74-1- 70 STN- BS13 DATE 18/ 8/74 GMT 19,4
POSITION 69-49,0N, 138-23,2W DEPTH 191

WIND DIR- 315 WAVE P/H AIR TEMP 0,8 WW
WIND SPD- 8 SWELL P/H WET BLB 0,3 CLD-A 8
SWELL D BARO 1017,7

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1,97	3,43	0	2,77	2459,5	0,0	0,0	1416,
1	1,91	3,45	1	2,79	2457,9	0,25	0,00	1416,
3	1,80	3,50	3	2,82	2454,4	0,74	0,01	1416,
5	1,38	3,84	5	3,09	2428,1	1,23	0,03	1414,
7	0,34	11,50	7	9,23	1820,7	1,68	0,06	1419,
10	-1,38	27,27	10	21,94	589,1	1,99	0,08	1432,
15	-1,56	29,32	15	23,60	430,4	2,23	0,11	1434,
20	-1,61	29,92	20	24,08	384,7	2,43	0,15	1435,
30	-1,63	31,05	30	24,99	297,3	2,76	0,23	1437,
50	-1,52	31,66	50	25,49	249,7	3,31	0,45	1438,
75	-1,51	32,19	75	25,91	209,5	3,87	0,81	1440,
100	-1,52	32,43	99	26,11	190,3	4,37	1,25	1440,
125	-1,47	32,64	124	26,28	174,6	4,83	1,77	1441,
150	-1,47	32,88	149	26,47	156,1	5,24	2,35	1442,

REFERENCE NO. 74-1- 71 STN- BS13 DATE 18/ 8/74 GMT 19.5
POSITION 69-49.0N, 138-23.2W DEPTH 191

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.99	3.43	0	2.77	2459.4	0.0	0.0	1416.
1	2.00	3.43	1	2.77	2459.4	0.25	0.00	1417.
3	2.00	3.50	3	2.83	2453.9	0.74	0.01	1417.
5	1.70	3.86	5	3.11	2425.7	1.23	0.03	1416.
7	0.59	5.94	7	4.76	2262.2	1.70	0.06	1413.
10	-1.39	28.33	10	22.79	507.2	1.98	0.08	1434.
15	-1.54	29.43	15	23.68	422.3	2.21	0.11	1435.

REFERENCE NO. 74-1- 72 STN- BS13 DATE 18/ 8/74 GMT 20.4
POSITION 69-48.9N, 138-23.2W DEPTH 191

WIND DIR- 315	WAVE P/H	AIR TEMP	.	WW
WIND SPD- 10	SWELL P/H	WET BLB	.	CLD-A 8
	SWELL D	BARO	1017.7	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.06	3.43	0	2.77	2459.3	0.0	0.0	1417.
1	2.00	3.45	1	2.79	2457.7	0.25	0.00	1417.
3	1.88	3.50	3	2.82	2454.2	0.74	0.01	1416.
5	1.56	3.84	5	3.09	2427.6	1.23	0.03	1415.
7	0.51	11.56	7	9.28	1816.3	1.68	0.06	1420.
10	-1.35	27.34	10	21.99	583.7	1.99	0.08	1433.
15	-1.54	29.27	15	23.55	434.6	2.23	0.11	1434.
20	-1.59	29.96	20	24.11	381.2	2.43	0.15	1435.
30	-1.64	31.15	30	25.08	289.2	2.76	0.23	1437.
50	-1.53	31.69	50	25.51	247.7	3.31	0.45	1438.
75	-1.48	32.21	75	25.93	207.5	3.86	0.81	1440.
100	-1.47	32.43	99	26.11	190.4	4.36	1.25	1441.
125	-1.48	32.68	124	26.31	171.1	4.81	1.76	1441.
150	-1.47	32.88	149	26.47	156.1	5.22	2.34	1442.
175	-1.44	33.04	174	26.61	143.1	5.60	2.95	1443.

REFERENCE NO, 74-1- 73 STN- BS14 DATE 18/ 8/74 GMT 21,2
POSITION 69-44,0N, 138-22,9W DEPTH 162

WIND DIR- 270 WAVE P/H AIR TEMP . WW
WIND SPD- 12 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1017,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,86	3,43	0	2,78	2458,5	0,0	0,0	1425,
1	3,77	3,45	1	2,80	2456,7	0,25	0,00	1425,
3	3,58	3,50	3	2,84	2452,8	0,74	0,01	1424,
5	2,57	3,84	5	3,11	2425,9	1,22	0,03	1420,
7	0,94	11,90	7	9,56	1788,6	1,68	0,06	1423,
10	-1,39	28,18	10	22,67	518,8	1,97	0,08	1433,
15	-1,56	29,48	15	23,73	418,2	2,19	0,11	1435,
20	-1,59	30,00	20	24,14	378,5	2,39	0,14	1435,
30	-1,64	30,99	30	24,95	301,4	2,73	0,23	1437,
50	-1,53	31,64	50	25,47	251,7	3,28	0,45	1438,
75	-1,48	32,21	75	25,93	207,5	3,84	0,81	1440,
100	-1,47	32,44	99	26,12	189,7	4,34	1,25	1441,
125	-1,48	32,68	124	26,31	171,1	4,79	1,76	1441,
150	-1,55	32,82	149	26,43	160,0	5,19	2,33	1441,

REFERENCE NO, 74-1- 74 STN- BS14 DATE 18/ 8/74 GMT 21,3
POSITION 69-44,0N, 138-22,9W DEPTH 162

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4,14	3,43	0	2,78	2458,8	0,0	0,0	1426,
1	4,13	3,43	1	2,78	2458,7	0,25	0,00	1426,
3	3,76	3,50	3	2,84	2452,9	0,74	0,01	1425,
5	3,33	3,86	5	3,13	2424,1	1,22	0,03	1423,
7	1,63	5,51	7	4,44	2293,6	1,70	0,06	1418,
10	-1,45	28,90	10	23,25	463,5	2,02	0,09	1434,
15	-1,56	29,56	15	23,79	412,0	2,23	0,11	1435,
20	-1,60	30,04	20	24,18	375,2	2,43	0,15	1435,

REFERENCE NO, 74-1- 75 STN- BS15 DATE 18/ 8/74 GMT 22,4
POSITION 69-38,6N, 138-22,4W DEPTH 144

WIND DIR- 270 WAVE P/H AIR TEMP . WW
WIND SPD- 08 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1016,8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,88	3,43	0	2,78	2458,5	0,0	0,0	1425,
1	3,89	3,45	1	2,80	2456,7	0,25	0,00	1425,
3	3,89	3,50	3	2,84	2453,0	0,74	0,01	1425,
5	3,06	3,84	5	3,11	2425,6	1,22	0,03	1422,
7	1,38	11,31	7	9,09	1834,9	1,68	0,06	1424,
10	-1,25	26,96	10	21,68	613,9	2,00	0,08	1432,
15	-1,54	29,56	15	23,79	412,1	2,23	0,11	1435,
20	-1,61	30,34	20	24,42	351,9	2,42	0,15	1436,
30	-1,65	31,07	30	25,01	295,2	2,74	0,23	1437,
50	-1,50	31,90	50	25,68	231,4	3,26	0,44	1439,
75	-1,49	32,21	75	25,93	207,5	3,80	0,78	1440,
100	-1,49	32,35	99	26,05	196,4	4,31	1,23	1440,
125	-1,48	32,56	124	26,21	180,7	4,78	1,77	1441,

REFERENCE NO, 74-1- 76 STN- BS16 DATE 18/ 8/74 GMT 23,8
POSITION 69-33,0N, 138-23,7W DEPTH 103

WIND DIR- 270 WAVE P/H AIR TEMP . WW
WIND SPD- 30 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1016,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,89	3,43	0	2,78	2458,5	0,0	0,0	1425,
1	3,90	3,45	1	2,80	2456,8	0,25	0,00	1425,
3	3,91	3,50	3	2,84	2453,1	0,74	0,01	1426,
5	3,51	3,84	5	3,11	2425,7	1,22	0,03	1424,
7	1,76	11,62	7	9,34	1810,7	1,68	0,06	1426,
10	-1,40	27,65	10	22,24	559,7	1,98	0,08	1433,
15	-1,54	29,75	15	23,94	397,8	2,20	0,11	1435,
20	-1,62	30,66	20	24,68	327,4	2,39	0,14	1436,
30	-1,65	31,34	30	25,23	274,8	2,68	0,22	1437,
50	-1,53	31,99	50	25,76	224,5	3,18	0,42	1439,
75	-1,49	32,11	75	25,85	215,6	3,73	0,77	1440,

REFERENCE NO, 74-1- 77 STN- BS16 DATE 18/ 8/74 GMT 23,8
POSITION 69-33,0N, 138-23,7W DEPTH 103

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,78	3,43	0	2,78	2458,4	0,0	0,0	1425,
1	3,80	3,43	1	2,78	2458,4	0,25	0,00	1425,
3	3,90	3,50	3	2,84	2453,1	0,74	0,01	1426,
5	3,89	3,86	5	3,12	2424,5	1,22	0,03	1426,
7	0,81	11,47	7	9,21	1822,6	1,69	0,06	1421,
10	-1,39	28,80	10	23,17	471,0	1,90	0,08	1434,
15	-1,54	29,80	15	23,98	393,7	2,11	0,10	1435,
20	-1,61	30,79	20	24,78	317,2	2,29	0,14	1436,

REFERENCE NO, 74-1- 78 STN- BS17 DATE 19/ 8/74 GMT 1,1
POSITION 69-26,3N, 138- 9,9W DEPTH 66

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 25 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1015,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4,14	5,16	0	4,15	2322,0	0,0	0,0	1429,
1	4,24	5,87	1	4,72	2266,6	0,23	0,00	1430,
3	4,38	5,95	3	4,78	2260,5	0,68	0,01	1431,
5	2,91	6,95	5	5,60	2178,7	1,13	0,03	1425,
7	0,61	12,48	7	10,02	1743,5	1,54	0,05	1422,
10	-1,28	28,52	10	22,94	493,0	1,79	0,07	1434,
15	-1,59	30,15	15	24,26	367,0	1,99	0,10	1435,
20	-1,63	30,71	20	24,72	323,3	2,16	0,13	1436,
30	-1,65	31,31	30	25,21	276,9	2,46	0,21	1437,
50	-1,48	31,89	50	25,67	232,9	2,97	0,41	1439,

REFERENCE NO, 74-1- 79 STN- BS18 DATE 19/ 8/74 GMT 2,0
POSITION 69-24,2N, 138- 7,7W DEPTH 52

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 22 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1014,8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4,12	5,16	0	4,16	2321,9	0,0	0,0	1429,
1	4,11	5,87	1	4,72	2266,3	0,23	0,00	1429,
3	4,08	5,95	3	4,78	2259,8	0,68	0,01	1429,
5	3,69	6,95	5	5,59	2179,6	1,13	0,03	1429,
7	2,16	11,74	7	9,43	1801,0	1,54	0,05	1428,
10	-1,29	28,35	10	22,81	505,9	1,82	0,08	1434,
15	-1,53	30,04	15	24,18	375,3	2,04	0,10	1435,
20	-1,59	30,67	20	24,68	326,7	2,21	0,13	1436,
30	-1,63	31,34	30	25,23	274,8	2,51	0,21	1437,

REFERENCE NO, 74-1- 80 STN- BS19 DATE 19/ 8/74 GMT 2,7
POSITION 69-18,8N, 138- 5,7W DEPTH 42

WIND DIR- 315 WAVE P/H AIR TEMP . WW
WIND SPD- 30 SWELL P/H WET BLB . CLD-A 7
SWELL D BARO 1014,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,90	5,16	0	4,16	2321,5	0,0	0,0	1428,
1	3,90	5,87	1	4,72	2265,9	0,23	0,00	1428,
3	3,90	5,95	3	4,79	2259,4	0,68	0,01	1429,
5	3,78	7,40	5	5,95	2144,4	1,12	0,03	1430,
7	-0,28	22,29	7	17,91	976,3	1,47	0,05	1431,
10	-1,36	28,56	10	22,97	490,1	1,65	0,06	1434,
15	-1,55	30,07	15	24,20	373,2	1,86	0,09	1435,
20	-1,60	30,62	20	24,65	330,2	2,03	0,12	1436,
30	-1,61	31,10	30	25,04	293,2	2,33	0,20	1437,

REFERENCE NO, 74-1- 81   STN- BS20   DATE 21/ 8/74   GMT 19,5
POSITION 69-26,7N, 138-48,9W   DEPTH 70

WIND DIR- 270   WAVE P/H 0 ,5   AIR TEMP   ,   WW
WIND SPD- 20   SWELL P/H   WET BLB   ,   CLD-A 8
SWELL D   BARO 1025,3

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0,82	9,00	0	7,23	2018,4	0,0	0,0	1418,
1	0,82	9,00	1	7,23	2018,5	0,20	0,00	1418,
3	0,82	9,00	3	7,23	2018,5	0,61	0,01	1418,
5	0,82	9,00	5	7,23	2018,4	1,01	0,03	1418,
7	0,34	11,00	7	8,83	1860,4	1,40	0,05	1418,
10	-0,37	20,82	10	16,72	1090,8	1,87	0,09	1428,
15	-1,47	30,22	15	24,32	361,0	2,11	0,12	1436,
20	-1,58	31,32	20	25,21	276,4	2,26	0,15	1437,
30	-1,61	32,27	30	25,98	203,5	2,49	0,20	1438,
50	-1,58	32,36	50	26,06	195,9	2,89	0,37	1439,

REFERENCE NO, 74-1- 82   STN- BS21   DATE 22/ 8/74   GMT 15,8
POSITION 69-36,4N, 138-34,2W   DEPTH 13

WIND DIR- 090   WAVE P/H 0 00   AIR TEMP   ,   WW
WIND SPD- 00   SWELL P/H   WET BLB   ,   CLD-A 7
SWELL D   BARO 1029,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1,00	8,12	0	6,53	2087,4	0,0	0,0	1418,
1	1,01	8,25	1	6,63	2077,0	0,21	0,00	1418,
3	0,90	8,55	3	6,86	2054,1	0,62	0,01	1418,
5	0,88	8,78	5	7,06	2035,1	1,03	0,03	1418,
7	0,50	10,85	7	8,71	1872,0	1,43	0,05	1419,

REFERENCE NO, 74-1- 83 STN- BS21 DATE 22/ 8/74 GMT 15,9
POSITION 69-36,4N, 138-34,2W DEPTH 13

WIND DIR- 090 WAVE P/H 0 00 AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A 7
SWELL D BARO 1029,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1,19	7,41	0	5,95	2143,9	0,0	0,0	1418,
1	1,19	7,47	1	6,00	2139,2	0,21	0,00	1418,
3	0,87	8,57	3	6,89	2052,0	0,63	0,01	1418,
5	0,86	8,76	5	7,03	2037,3	1,04	0,03	1418,
7	0,35	10,29	7	8,25	1917,0	1,44	0,05	1418,

REFERENCE NO, 74-1- 84 STN- BS22 DATE 22/ 8/74 GMT 16,7
POSITION 69-35,5N, 138-41,9W DEPTH 46

WIND DIR- 090 WAVE P/H 0 00 AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A 7
SWELL D BARO 1029,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1,69	6,64	0	5,34	2204,2	0,0	0,0	1419,
1	1,59	6,75	1	5,43	2195,4	0,22	0,00	1419,
3	1,08	7,88	3	6,33	2106,3	0,65	0,01	1418,
5	0,90	8,20	5	6,59	2081,3	1,07	0,03	1417,
7	0,81	8,36	7	6,71	2068,8	1,49	0,05	1417,
10	-0,29	18,98	10	15,25	1234,1	2,04	0,10	1426,
15	-1,50	30,62	15	24,65	330,3	2,29	0,13	1436,
20	-1,59	31,88	20	25,66	233,6	2,43	0,15	1438,
30	-1,59	32,32	30	26,02	199,4	2,64	0,21	1439,

REFERENCE NO. 74-1- 85 STN- BS23 DATE 22/ 8/74 GMT 18.0
POSITION 69-28.1N, 138-38.0W DEPTH 18

WIND DIR- 090 WAVE P/H 0 00 AIR TEMP -..3 WW
WIND SPD- 04 SWELL P/H WET BLB -..5 CLD-A 6
SWELL D BARO 1028.6

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.37	7.72	0	6.19	2120.8	0.0	0.0	1414.
1	0.35	7.75	1	6.21	2118.9	0.21	0.00	1414.
3	0.42	8.09	3	6.49	2091.1	0.63	0.01	1415.
5	0.44	8.34	5	6.69	2071.2	1.05	0.03	1415.
7	0.62	9.26	7	7.43	1997.7	1.46	0.05	1418.
10	-1.15	24.01	10	19.30	842.7	1.95	0.09	1429.

REFERENCE NO. 74-1- 86 STN- BS23 DATE 22/ 8/74 GMT 18.0
POSITION 69-28.1N, 138-38.0W DEPTH 18

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.32	7.80	0	6.25	2114.5	0.0	0.0	1414.
1	0.39	7.78	1	6.23	2116.6	0.21	0.00	1414.
3	0.43	8.12	3	6.51	2088.9	0.63	0.01	1415.
5	0.48	8.34	5	6.69	2071.1	1.05	0.03	1416.
7	0.65	9.35	7	7.51	1990.6	1.46	0.05	1418.
10	-1.11	23.99	10	19.28	844.0	1.96	0.09	1429.

REFERENCE NO, 74-1- 87   STN- BS24   DATE 22/ 8/74   GMT 22.5
POSITION 69-24.5N, 138-21.0W   DEPTH 74

WIND DIR- 000	WAVE P/H 0 00	AIR TEMP	.	WW	
WIND SPD- 00	SWELL P/H	WET BLB	.	CLD-A	4
	SWELL D	BARO	1026.0		

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.67	2.91	0	2.34	2501.9	0.0	0.0	1414.
1	1.68	4.35	1	3.50	2386.8	0.24	0.00	1416.
3	1.66	4.76	3	3.84	2353.6	0.72	0.01	1417.
5	0.49	5.04	5	4.02	2334.8	1.19	0.03	1411.
7	0.53	7.17	7	5.75	2163.9	1.64	0.06	1414.
10	-0.74	25.36	10	20.38	738.2	2.04	0.09	1433.
15	-1.42	29.19	15	23.49	440.9	2.31	0.12	1435.
20	-1.55	30.10	20	24.23	370.4	2.51	0.16	1436.
30	-1.64	31.34	30	25.23	274.8	2.82	0.24	1437.
50	-1.49	32.12	50	25.86	215.1	3.31	0.44	1439.

REFERENCE NO, 74-1- 88   STN- BS25   DATE 23/ 8/74   GMT 1.6
POSITION 69-28.9N, 138- 0.3W   DEPTH 69

WIND DIR- 045	WAVE P/H 0 .2	AIR TEMP	.	WW	
WIND SPD- 8	SWELL P/H	WET BLB	.	CLD-A	5
	SWELL D	BARO	1025.0		

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.09	2.91	0	2.32	2503.8	0.0	0.0	1412.
1	1.08	4.35	1	3.49	2388.4	0.24	0.00	1413.
3	1.08	4.76	3	3.82	2355.1	0.72	0.01	1414.
5	1.08	5.04	5	4.05	2332.9	1.19	0.03	1414.
7	1.14	6.66	7	5.35	2203.3	1.64	0.06	1417.
10	-0.58	25.00	10	20.09	766.4	2.11	0.10	1433.
15	-1.53	29.88	15	24.05	387.6	2.36	0.13	1435.
20	-1.58	30.46	20	24.52	342.5	2.54	0.16	1436.
30	-1.62	31.42	30	25.29	268.8	2.83	0.23	1437.
50	-1.51	32.00	50	25.76	223.9	3.32	0.43	1439.

REFERENCE NO. 74-1- 89 STN- BS26 DATE 23/ 8/74 GMT 3.2
POSITION 69-28.9N, 137-43.5W DEPTH 50

WIND DIR- 045 WAVE P/H 00 AIR TEMP 0..9 WW
WIND SPD- 10 SWELL P/H WET BLB 0..7 CLD-A 2
SWELL D BARO 1023.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.82	5.00	0	4.00	2336.9	0.0	0.0	1413.
1	0.82	5.00	1	4.00	2337.1	0.23	0.00	1413.
3	0.83	5.00	3	4.00	2337.0	0.70	0.01	1413.
5	0.73	5.00	5	4.00	2337.2	1.17	0.03	1413.
7	0.15	5.00	7	3.98	2339.5	1.64	0.06	1410.
10	-1.13	25.90	10	20.83	695.3	2.16	0.10	1432.
15	-1.54	30.15	15	24.26	367.1	2.38	0.13	1436.
20	-1.61	30.79	20	24.78	317.2	2.56	0.16	1436.
30	-1.65	31.42	30	25.29	268.7	2.84	0.23	1437.

REFERENCE NO. 74-1- 90 STN- BS27 DATE 23/ 8/74 GMT 4.4
POSITION 69-30.2N, 137-28.5W DEPTH 51

WIND DIR- 045 WAVE P/H 0 00 AIR TEMP . WW
WIND SPD- 12 SWELL P/H WET BLB . CLD-A 2
SWELL D BARO 1022.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.32	5.00	0	4.02	2334.9	0.0	0.0	1429.
1	4.43	5.00	1	4.02	2335.3	0.23	0.00	1430.
3	4.23	5.00	3	4.03	2334.8	0.70	0.01	1429.
5	1.39	5.00	5	4.02	2335.2	1.17	0.03	1416.
7	0.74	5.00	7	4.00	2337.1	1.63	0.06	1413.
10	-0.08	7.82	10	6.25	2114.7	2.33	0.12	1412.
15	-1.46	29.51	15	23.75	416.2	2.72	0.16	1435.
20	-1.59	30.64	20	24.66	328.8	2.90	0.20	1436.
30	-1.62	31.55	30	25.40	258.6	3.19	0.27	1437.

REFERENCE NO. 74-1- 91 STN- BS28 DATE 23/ 8/74 GMT 14.8
POSITION 69-29.8N, 137-10.5W DEPTH 39

WIND DIR- 090 WAVE P/H 1 4. AIR TEMP . WW
WIND SPD- 20 SWELL P/H WET BLB . CLD-A 4
SWELL D BARO 1020.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.39	4.33	0	3.50	2387.2	0.0	0.0	1420.
1	2.38	4.87	1	3.94	2343.9	0.24	0.00	1420.
3	2.27	5.51	3	4.45	2293.0	0.70	0.01	1420.
5	2.15	5.81	5	4.69	2269.4	1.16	0.03	1420.
7	0.84	6.53	7	5.24	2214.2	1.61	0.06	1415.
10	0.11	14.63	10	11.75	1574.3	2.21	0.11	1422.
15	-1.20	27.73	15	22.31	553.7	2.57	0.15	1434.
20	-1.46	29.57	20	23.80	411.4	2.82	0.20	1435.
30	-1.60	30.91	30	24.88	307.6	3.17	0.28	1437.

REFERENCE NO. 74-1- 92 STN- BS29 DATE 23/ 8/74 GMT 17.8
POSITION 69-31.5N, 136-45.7W DEPTH 13

WIND DIR- 090 WAVE P/H 1 .5 AIR TEMP . WW
WIND SPD- 20 SWELL P/H WET BLB . CLD-A 6
SWELL D BARO 1017.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.97	6.90	0	5.47	2191.7	0.0	0.0	1439.
1	6.15	6.90	1	5.46	2192.9	0.22	0.00	1440.
3	4.63	6.90	3	5.53	2186.3	0.66	0.01	1433.
5	2.70	6.90	5	5.56	2182.8	1.09	0.03	1424.
7	1.94	7.12	7	5.73	2165.8	1.53	0.05	1421.
10	2.32	6.93	10	5.58	2180.3	2.18	0.11	1423.

REFERENCE NO. 74-1- 93 STN- BS36 DATE 23/ 8/74 GMT 22.2
POSITION 69-18.2N, 137-10.9W DEPTH 13

WIND DIR- 045 WAVE P/H 1 4 AIR TEMP . WW
WIND SPD- 24 SWELL P/H 4 4 WET BLB . CLD-A
SWELL D BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.32	0.0	0	-0.00	2736.2	0.0	0.0	1432.
1	6.11	0.0	1	0.00	2735.7	0.27	0.00	1431.
3	6.01	0.0	3	0.01	2735.2	0.82	0.01	1431.
5	6.33	1.99	5	1.57	2578.5	1.35	0.03	1435.
7	4.19	3.86	7	3.12	2424.7	1.85	0.06	1427.

REFERENCE NO. 74-1- 94 STN- BS37 DATE 23/ 8/74 GMT 23.7
POSITION 69-17.7N, 137-32.5W DEPTH 38

WIND DIR- 045 WAVE P/H 1 4 AIR TEMP . WW
WIND SPD- 25 SWELL P/H 4 4 WET BLB . CLD-A
SWELL D BARO 1015.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.13	4.15	0	3.32	2404.3	0.0	0.0	1432.
1	5.21	4.55	1	3.65	2372.7	0.24	0.00	1433.
3	4.76	5.78	3	4.63	2274.7	0.70	0.01	1432.
5	4.10	6.09	5	4.89	2248.9	1.16	0.03	1430.
7	0.95	6.95	7	5.58	2180.5	1.60	0.06	1416.
10	-0.81	20.90	10	16.79	1084.0	2.16	0.10	1426.
15	-1.46	29.14	15	23.45	444.9	2.48	0.14	1435.
20	-1.54	30.21	20	24.31	362.3	2.68	0.18	1436.
30	-1.59	31.36	30	25.25	272.9	2.99	0.26	1437.

REFERENCE NO. 74-1- 95 STN- BS38 DATE 24/ 8/74 GMT 1.8
POSITION 69-18.0N, 137-53.9W DEPTH 39

WIND DIR- 045 WAVE P/H 1 00 AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.19	4.15	0	3.33	2404.2	0.0	0.0	1414.
1	1.06	4.55	1	3.65	2372.1	0.24	0.00	1414.
3	0.82	5.78	3	4.63	2274.5	0.70	0.01	1414.
5	0.50	6.09	5	4.87	2251.1	1.16	0.03	1413.
7	0.40	7.19	7	5.76	2163.3	1.60	0.06	1414.
10	-1.11	24.97	10	20.07	767.9	2.01	0.09	1430.
15	-1.42	29.14	15	23.44	445.0	2.28	0.12	1435.
20	-1.59	30.72	20	24.73	322.7	2.47	0.16	1436.
30	-1.62	31.44	30	25.31	266.8	2.75	0.23	1437.

REFERENCE NO. 74-1- 96 STN- BS39 DATE 24/ 8/74 GMT 3.6
POSITION 69-18.3N, 138-14.4W DEPTH 39

WIND DIR- 000 WAVE P/H 0 00 AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1013.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.10	5.16	0	4.14	2323.3	0.0	0.0	1414.
1	1.05	5.87	1	4.71	2267.1	0.23	0.00	1415.
3	0.73	5.95	3	4.77	2261.6	0.68	0.01	1414.
5	0.47	6.92	5	5.54	2184.7	1.13	0.03	1414.
7	-1.00	23.21	7	18.65	904.5	1.45	0.05	1428.
10	-1.38	27.82	10	22.38	546.8	1.65	0.06	1433.
15	-1.51	29.48	15	23.72	418.2	1.89	0.09	1435.
20	-1.63	30.79	20	24.78	317.2	2.07	0.13	1436.
30	-1.62	31.29	30	25.19	279.0	2.36	0.20	1437.

REFERENCE NO, 74-1- 97   STN- BS40   DATE 24/ 8/74   GMT 15.4
POSITION 69-22.0N, 138-20.0W   DEPTH 27

WIND DIR- 000   WAVE P/H 0 00   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1007.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.38	5.16	0	4.15	2322.6	0.0	0.0	1416.
1	1.30	5.95	1	4.79	2259.4	0.23	0.00	1416.
3	1.14	5.95	3	4.78	2260.4	0.68	0.01	1416.
5	0.10	10.39	5	8.33	1909.3	1.12	0.03	1416.
7	-1.30	27.70	7	22.28	556.5	1.30	0.04	1433.
10	-1.48	29.74	10	23.93	398.6	1.44	0.05	1435.
15	-1.61	30.86	15	24.84	311.8	1.61	0.07	1436.
20	-1.62	31.29	20	25.19	279.1	1.76	0.10	1437.

REFERENCE NO, 74-1- 98   STN- BS40   DATE 24/ 8/74   GMT 17.1
POSITION 69-22.0N, 138-20.0W   DEPTH 27

WIND DIR- 000   WAVE P/H 0 00   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1007.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.74	5.42	0	4.36	2301.4	0.0	0.0	1418.
1	1.54	5.95	1	4.79	2258.9	0.23	0.00	1418.
3	1.16	5.95	3	4.78	2260.3	0.68	0.01	1416.
5	-0.12	12.84	5	10.30	1716.2	1.12	0.03	1419.
7	-1.23	27.52	7	22.14	570.2	1.28	0.04	1433.
10	-1.48	29.75	10	23.94	397.9	1.42	0.05	1435.
15	-1.63	30.99	15	24.95	301.6	1.59	0.07	1436.
20	-1.63	31.33	20	25.22	275.7	1.73	0.10	1437.

REFERENCE NO. 74-1- 99   STN- BS40   DATE 24/ 8/74   GMT 19.8
POSITION 69-22.0N, 138-20.0W   DEPTH 27

WIND DIR- 000   WAVE P/H 0 00   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1006.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.00	5.42	0	4.37	2301.0	0.0	0.0	1419.
1	1.50	5.95	1	4.79	2259.0	0.23	0.00	1417.
3	1.26	5.95	3	4.78	2260.1	0.68	0.01	1416.
5	-0.26	17.43	5	14.00	1355.1	1.09	0.03	1424.
7	-1.27	27.81	7	22.37	547.6	1.25	0.04	1433.
10	-1.50	29.94	10	24.10	382.9	1.38	0.05	1435.
15	-1.62	31.10	15	25.04	293.4	1.55	0.07	1437.
20	-1.63	31.29	20	25.19	279.1	1.69	0.09	1437.

REFERENCE NO. 74-1-100   STN- BS41   DATE 25/ 8/74   GMT 14.6
POSITION 69-49.4N, 135- 0.1W   DEPTH 11

WIND DIR- 120   WAVE P/H   AIR TEMP .   WW
WIND SPD- 10   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1008.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.18	2.00	0	1.62	2574.1	0.0	0.0	1429.
1	5.18	2.00	1	1.62	2574.3	0.26	0.00	1429.
3	5.18	2.00	3	1.62	2574.2	0.77	0.01	1429.
5	5.18	2.02	5	1.63	2572.8	1.29	0.03	1429.
7	1.50	3.12	7	2.51	2485.2	1.79	0.06	1414.

REFERENCE NO. 74-1-101 STN- BS42 DATE 25/ 8/74 GMT 16.7
POSITION 69-57.3N, 134-59.8W DEPTH 22

WIND DIR- 100 WAVE P/H AIR TEMP . WW
WIND SPD- 12 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1008.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3.88	2.80	0	2.28	2508.5	0.0	0.0	1425.
1	3.84	2.80	1	2.28	2508.7	0.25	0.00	1424.
3	3.32	2.80	3	2.28	2508.4	0.75	0.01	1422.
5	3.21	3.96	5	3.21	2415.9	1.25	0.03	1423.
7	2.72	6.37	7	5.13	2225.0	1.71	0.06	1424.
10	-0.85	24.74	10	19.89	785.9	2.24	0.10	1431.
15	-1.26	28.16	15	22.65	520.9	2.54	0.14	1434.

REFERENCE NO. 74-1-102 STN- BS43 DATE 26/ 8/74 GMT 13.6
POSITION 70- 0.4N, 132-55.1W DEPTH 24

WIND DIR- 200 WAVE P/H AIR TEMP . WW
WIND SPD- 09 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1011.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.97	3.40	0	2.75	2461.9	0.0	0.0	1416.
1	1.55	3.38	1	2.72	2464.3	0.25	0.00	1414.
3	0.58	3.38	3	2.69	2467.8	0.74	0.01	1410.
5	0.53	4.94	5	3.94	2343.2	1.22	0.03	1411.
7	-0.25	7.58	7	6.05	2134.5	1.69	0.06	1411.
10	-1.36	27.53	10	22.14	569.4	1.94	0.08	1433.
15	-1.45	28.58	15	23.00	487.9	2.20	0.11	1434.
20	-1.52	30.21	20	24.31	362.3	2.41	0.15	1436.

REFERENCE NO, 74-1-103   STN- BS44   DATE 26/ 8/74   GMT 16,9
POSITION 69-58,2N, 132- 1,6W   DEPTH 17

WIND DIR- 120   WAVE P/H 0 00   AIR TEMP .   WW
WIND SPD- 08   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1012,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0,88	4,31	0	3,45	2391,7	0,0	0,0	1412,
1	0,86	4,63	1	3,71	2366,4	0,24	0,00	1413,
3	0,36	4,82	3	3,84	2353,5	0,71	0,01	1410,
5	0,04	5,01	5	3,98	2339,5	1,18	0,03	1409,
7	-0,74	21,47	7	17,25	1040,0	1,56	0,05	1427,
10	-1,33	27,51	10	22,13	570,8	1,77	0,07	1433,

REFERENCE NO, 74-1-104   STN- BS45   DATE 26/ 8/74   GMT 20,4
POSITION 70- 5,4N, 131-47,2W   DEPTH 22

WIND DIR- 120   WAVE P/H   AIR TEMP .   WW
WIND SPD- 07   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1013,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2,28	4,31	0	3,49	2388,3	0,0	0,0	1419,
1	2,02	4,62	1	3,73	2364,2	0,24	0,00	1418,
3	0,30	4,82	3	3,84	2353,8	0,71	0,01	1410,
5	0,09	5,12	5	4,07	2330,2	1,18	0,03	1410,
7	-0,65	19,83	7	15,93	1168,0	1,58	0,05	1425,
10	-1,33	27,53	10	22,14	569,4	1,78	0,07	1433,
15	-1,44	28,58	15	23,00	487,9	2,04	0,10	1434,

REFERENCE NO. 74-1-105 STN- BS46 DATE 26/ 8/74 GMT 21.7
POSITION 70-12.0N, 131-41.9W DEPTH 26

WIND DIR- 080 WAVE P/H AIR TEMP . WW
WIND SPD- 07 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.95	4.88	0	3.91	2346.0	0.0	0.0	1413.
1	0.86	4.86	1	3.89	2348.2	0.23	0.00	1413.
3	0.72	4.91	3	3.93	2344.7	0.70	0.01	1412.
5	0.39	5.37	5	4.28	2309.2	1.17	0.03	1411.
7	-1.09	24.54	7	19.72	801.6	1.48	0.05	1430.
10	-1.36	27.50	10	22.12	572.0	1.68	0.06	1433.
15	-1.47	29.14	15	23.45	444.9	1.92	0.10	1435.
20	-1.52	30.67	20	24.68	326.9	2.12	0.13	1436.

REFERENCE NO. 74-1-106 STN- BS47 DATE 26/ 8/74 GMT 23.7
POSITION 70-19.7N, 131-41.6W DEPTH 35

WIND DIR- 100 WAVE P/H AIR TEMP . WW
WIND SPD- 11 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.28	4.88	0	3.94	2343.2	0.0	0.0	1420.
1	2.13	4.86	1	3.92	2345.2	0.23	0.00	1419.
3	1.83	4.91	3	3.96	2341.7	0.70	0.01	1418.
5	1.17	6.27	5	5.04	2234.5	1.17	0.03	1416.
7	-1.21	25.57	7	20.56	721.4	1.42	0.04	1431.
10	-1.38	27.91	10	22.45	539.9	1.60	0.06	1433.
15	-1.38	29.46	15	23.70	420.5	1.84	0.09	1435.
20	-1.46	30.35	20	24.42	351.5	2.03	0.12	1436.

REFERENCE NO, 74-1-107 STN- BS47 DATE 27/ 8/74 GMT 0.5
POSITION 70-20.0N, 131-41.9W DEPTH 35

WIND DIR- 090 WAVE P/H AIR TEMP . WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.98	5.00	0	4.03	2334.1	0.0	0.0	1418.
1	1.98	5.00	1	4.03	2334.3	0.23	0.00	1418.
3	1.76	5.00	3	4.03	2334.6	0.70	0.01	1417.
5	1.20	5.41	5	4.35	2302.7	1.17	0.03	1415.
7	-1.11	24.34	7	19.57	816.7	1.49	0.05	1429.
10	-1.36	27.87	10	22.42	543.4	1.69	0.07	1433.
15	-1.40	29.46	15	23.70	420.4	1.93	0.10	1435.
20	-1.48	30.39	20	24.46	348.1	2.12	0.13	1436.

REFERENCE NO, 74-1-108 STN- BS48 DATE 27/ 8/74 GMT 2.2
POSITION 70-26.9N, 131-41.8W DEPTH 37

WIND DIR- 090 WAVE P/H AIR TEMP . WW
WIND SPD- 16 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.34	4.00	0	3.23	2413.4	0.0	0.0	1419.
1	2.33	3.96	1	3.20	2416.6	0.24	0.00	1419.
3	2.33	3.95	3	3.20	2417.0	0.72	0.01	1419.
5	-0.28	10.72	5	8.59	1884.0	1.15	0.03	1415.
7	-1.10	24.85	7	19.98	776.9	1.38	0.04	1430.
10	-1.29	27.77	10	22.34	551.0	1.57	0.06	1433.
15	-1.40	29.46	15	23.70	420.4	1.81	0.09	1435.
20	-1.40	30.31	20	24.40	354.3	2.01	0.12	1437.
30	-1.51	30.97	30	24.93	303.7	2.33	0.20	1437.

REFERENCE NO. 74-1-109 STN- BS49 DATE 27/ 8/74 GMT 3.9
POSITION 70-30.8N, 131-43.4W DEPTH 41

WIND DIR- 100 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.38	4.00	0	3.18	2419.0	0.0	0.0	1409.
1	0.39	4.00	1	3.18	2419.1	0.24	0.00	1410.
3	0.41	4.00	3	3.18	2418.9	0.73	0.01	1410.
5	-0.64	12.63	5	10.12	1734.3	1.15	0.03	1416.
7	-1.12	24.56	7	19.75	799.5	1.39	0.04	1430.
10	-1.27	27.57	10	22.18	566.0	1.58	0.06	1433.
15	-1.34	29.32	15	23.59	430.8	1.82	0.09	1435.
20	-1.40	30.17	20	24.28	365.2	2.02	0.12	1436.
30	-1.47	30.94	30	24.90	305.8	2.35	0.21	1437.

REFERENCE NO. 74-1-110 STN- BS50 DATE 27/ 8/74 GMT 15.8
POSITION 70-33.4N, 131-42.8W DEPTH 41

WIND DIR- 135 WAVE P/H AIR TEMP 3.3 WW
WIND SPD- 11 SWELL P/H WET BLB 2.7 CLD-A
SWELL D BARO 1014.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.76	4.00	0	3.19	2417.5	0.0	0.0	1411.
1	0.71	3.96	1	3.16	2420.9	0.24	0.00	1411.
3	0.43	3.95	3	3.14	2422.4	0.73	0.01	1410.
5	-0.78	17.43	5	13.99	1355.6	1.12	0.03	1422.
7	-1.19	26.17	7	21.04	674.9	1.31	0.04	1432.
10	-1.34	28.14	10	22.64	522.2	1.48	0.05	1434.
15	-1.37	29.43	15	23.68	422.5	1.72	0.08	1435.
20	-1.42	30.24	20	24.34	359.7	1.91	0.12	1436.
30	-1.50	30.97	30	24.93	303.7	2.23	0.20	1437.

REFERENCE NO, 74-1-111 STN- BS51 DATE 27/ 8/74 GMT 17,6
POSITION 70-23,2N, 131-42,8W DEPTH 37

WIND DIR- 135 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2,32	4,39	0	3,55	2382,1	0,0	0,0	1419,
1	2,35	4,37	1	3,53	2384,3	0,24	0,00	1419,
3	2,25	4,31	3	3,48	2388,6	0,72	0,01	1419,
5	1,11	9,65	5	7,76	1966,2	1,15	0,03	1420,
7	-1,15	25,42	7	20,44	733,1	1,37	0,04	1431,
10	-1,30	28,16	10	22,65	521,0	1,55	0,06	1434,
15	-1,41	29,96	15	24,11	381,6	1,78	0,09	1436,
20	-1,37	30,32	20	24,40	353,7	1,96	0,12	1437,
30	-1,51	30,91	30	24,88	307,8	2,29	0,20	1437,

REFERENCE NO, 74-1-112 STN- BS51 DATE 27/ 8/74 GMT 17,7
POSITION 70-23,2N, 131-42,8W DEPTH 37

WIND DIR- 135 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2,39	4,30	0	3,48	2389,4	0,0	0,0	1419,
1	2,33	4,30	1	3,48	2389,6	0,24	0,00	1419,
3	2,21	4,30	3	3,47	2389,7	0,72	0,01	1419,
5	-0,06	14,64	5	11,75	1574,0	1,14	0,03	1421,
7	-1,15	25,79	7	20,74	704,2	1,33	0,04	1431,
10	-1,28	28,18	10	22,67	518,9	1,52	0,06	1434,
15	-1,35	29,85	15	24,02	389,9	1,74	0,08	1436,
20	-1,35	30,33	20	24,41	353,1	1,93	0,12	1437,
30	-1,51	30,91	30	24,88	307,8	2,26	0,20	1437,

REFERENCE NO. 74-1-113   STN- BS52   DATE 28/ 8/74   GMT 2.9
POSITION 69-56.6N, 133-27.1W   DEPTH 21

WIND DIR- 090   WAVE P/H   AIR TEMP .   WW
WIND SPD- 10   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.88	24.21	0	19.46	827.2	0.0	0.0	1425.
1	-1.90	22.42	1	18.00	967.4	0.09	0.00	1423.
3	-1.90	18.46	3	14.80	1277.8	0.33	0.01	1418.
5	-1.90	17.28	5	13.84	1370.3	0.59	0.02	1416.
7	-1.90	13.00	7	10.37	1709.8	0.90	0.03	1410.
10	6.01	8.45	10	6.69	2071.2	1.50	0.09	1441.
15	6.49	8.02	15	6.32	2107.6	2.54	0.22	1443.

REFERENCE NO. 74-1-114   STN- BS52   DATE 28/ 8/74   GMT 3.0
POSITION 69-56.6N, 133-27.1W   DEPTH 21

WIND DIR- 090   WAVE P/H   AIR TEMP .   WW
WIND SPD- 10   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3.46	3.30	0	2.68	2468.5	0.0	0.0	1423.
1	2.87	3.30	1	2.68	2468.8	0.25	0.00	1420.
3	1.80	3.30	3	2.66	2470.3	0.74	0.01	1415.
5	2.46	3.58	5	2.90	2446.8	1.23	0.03	1419.
7	1.37	11.65	7	9.37	1807.9	1.66	0.06	1424.
10	-1.32	27.42	10	22.06	577.6	1.94	0.08	1433.
15	-1.45	28.66	15	23.06	481.8	2.20	0.11	1434.

REFERENCE NO, 74-1-115   STN- BS53   DATE 28/ 8/74   GMT 23.9
POSITION 70- 4.4N, 135- 1.4W   DEPTH 24

WIND DIR- 315   WAVE P/H   AIR TEMP .   WW
WIND SPD- 17   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1012.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.24	5.00	0	4.03	2334.8	0.0	0.0	1429.
1	4.13	5.00	1	4.03	2334.7	0.23	0.00	1428.
3	2.80	5.00	3	4.04	2333.4	0.70	0.01	1422.
5	0.84	5.10	5	4.09	2328.5	1.17	0.03	1413.
7	0.43	9.25	7	7.42	1998.8	1.61	0.06	1417.
10	-1.30	27.48	10	22.10	573.5	1.88	0.08	1433.
15	-1.46	29.14	15	23.45	444.9	2.13	0.11	1435.

REFERENCE NO, 74-1-116   STN- BS54   DATE 29/ 8/74   GMT 4.9
POSITION 70-18.0N, 135-10.2W   DEPTH 55

WIND DIR- 000   WAVE P/H   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1015.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.07	4.63	0	3.67	2370.1	0.0	0.0	1409.
1	0.07	4.63	1	3.68	2369.7	0.24	0.00	1409.
3	0.10	4.65	3	3.69	2368.1	0.71	0.01	1409.
5	-0.61	8.55	5	6.82	2058.4	1.15	0.03	1411.
7	-1.32	25.14	7	20.21	754.4	1.40	0.04	1430.
10	-1.40	27.21	10	21.89	593.8	1.60	0.06	1432.
15	-1.53	29.54	15	23.77	413.9	1.84	0.09	1435.
20	-1.55	30.25	20	24.35	358.7	2.03	0.12	1436.
30	-1.59	30.58	30	24.61	333.4	2.37	0.21	1436.
50	-1.44	31.94	50	25.71	229.1	2.96	0.45	1439.

REFERENCE NO. 74-1-117   STN- BS54   DATE 29/ 8/74   GMT 5.0
POSITION 70-18.0N, 135-10.2W   DEPTH 55

WIND DIR- 000   WAVE P/H   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1015.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.08	4.60	0	3.65	2372.0	0.0	0.0	1409.
1	0.08	4.60	1	3.65	2372.2	0.24	0.00	1409.
3	0.08	4.60	3	3.65	2372.1	0.71	0.01	1409.
5	-0.50	7.05	5	5.61	2178.1	1.18	0.03	1409.
7	-1.28	24.76	7	19.90	784.5	1.44	0.04	1429.
10	-1.39	27.15	10	21.84	598.6	1.64	0.06	1432.
15	-1.52	29.45	15	23.70	421.0	1.89	0.09	1435.
20	-1.54	30.23	20	24.33	360.4	2.08	0.13	1436.
30	-1.58	30.55	30	24.59	335.8	2.42	0.21	1436.
50	-1.44	31.92	50	25.69	230.6	3.01	0.45	1439.

REFERENCE NO. 74-1-118   STN- BS55   DATE 30/ 8/74   GMT 5.3
POSITION 70- 8.1N, 135-34.3W   DEPTH 44

WIND DIR- 135   WAVE P/H 1 1.   AIR TEMP .   WW
WIND SPD- 20   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.20	5.51	0	4.45	2292.9	0.0	0.0	1420.
1	2.16	5.56	1	4.48	2289.7	0.23	0.00	1420.
3	2.10	5.54	3	4.47	2290.9	0.69	0.01	1420.
5	2.10	5.52	5	4.45	2292.8	1.15	0.03	1420.
7	-0.19	12.85	7	10.31	1715.1	1.58	0.06	1418.
10	-1.28	26.47	10	21.29	651.6	1.85	0.08	1432.
15	-1.50	28.87	15	23.23	465.9	2.12	0.11	1434.
20	-1.55	29.76	20	23.95	396.5	2.33	0.15	1435.
30	-1.58	30.73	30	24.74	321.6	2.69	0.24	1436.

REFERENCE NO. 74-1-119 STN- BS55 DATE 30/ 8/74 GMT 5.4
POSITION 70- 8.1N, 135-34.3W DEPTH 44

WIND DIR- 120 WAVE P/H 1 1. AIR TEMP 6.1 WW
WIND SPD- 26 SWELL P/H WET BLB 5.8 CLD-A
SWELL D BARO 1011.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.99	5.51	0	4.45	2293.2	0.0	0.0	1419.
1	1.99	5.57	1	4.49	2289.2	0.23	0.00	1419.
3	1.99	5.54	3	4.47	2291.0	0.69	0.01	1419.
5	2.01	5.52	5	4.45	2292.9	1.15	0.03	1419.
7	-0.74	22.50	7	18.08	959.7	1.55	0.05	1429.
10	-1.26	26.64	10	21.43	638.2	1.77	0.07	1432.

REFERENCE NO. 74-1-120 STN- BS56 DATE 30/ 8/74 GMT 13.4
POSITION 69-56.2N, 135-47.8W DEPTH 24

WIND DIR- 135 WAVE P/H AIR TEMP . WW
WIND SPD- 6 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1013.8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.00	4.00	0	3.23	2413.4	0.0	0.0	1427.
1	3.93	4.00	1	3.23	2413.5	0.24	0.00	1426.
3	3.48	4.00	3	3.24	2413.0	0.72	0.01	1424.
5	2.02	4.00	5	3.23	2413.8	1.21	0.03	1417.
7	-0.57	18.37	7	14.75	1281.8	1.65	0.06	1424.
10	-1.25	26.88	10	21.62	620.0	1.88	0.08	1432.
15	-1.47	28.74	15	23.13	475.4	2.15	0.11	1434.
20	-1.58	30.16	20	24.27	365.8	2.37	0.15	1435.

REFERENCE NO, 74-1-121 STN- 8856 DATE 30/ 8/74 GMT 14,7
POSITION 69-56,2N, 135-47,9W DEPTH 24

WIND DIR- 135 WAVE P/H AIR TEMP . WW
WIND SPD- 6 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1013,8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,88	3,47	0	2,81	2455,5	0,0	0,0	1425,
1	3,88	3,72	1	3,02	2435,3	0,24	0,00	1426,
3	3,08	4,09	3	3,31	2405,8	0,73	0,01	1422,
5	1,77	6,62	5	5,33	2205,8	1,19	0,03	1420,
7	-0,60	20,81	7	16,72	1091,5	1,58	0,05	1427,
10	-1,22	27,27	10	21,93	590,0	1,79	0,07	1433,
15	-1,49	29,19	15	23,49	440,8	2,05	0,10	1434,
20	-1,59	30,33	20	24,41	352,6	2,25	0,14	1436,

REFERENCE NO, 74-1-122 STN- 8S57 DATE 30/ 8/74 GMT 22,0
POSITION 70-21,1N, 136-36,3W DEPTH 61

WIND DIR- 000 WAVE P/H AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1016,2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0,73	5,65	0	4,53	2285,2	0,0	0,0	1413,
1	0,34	6,36	1	5,09	2229,6	0,23	0,00	1412,
3	-0,05	7,91	3	6,32	2107,5	0,66	0,01	1412,
5	-0,98	20,57	5	16,52	1110,4	1,01	0,02	1425,
7	-1,27	25,86	7	20,79	698,7	1,18	0,03	1431,
10	-1,37	27,65	10	22,24	559,8	1,36	0,05	1433,
15	-1,47	29,03	15	23,36	453,1	1,61	0,08	1434,
20	-1,55	30,08	20	24,21	371,8	1,82	0,12	1436,
30	-1,59	30,81	30	24,80	315,7	2,15	0,20	1437,

REFERENCE NO. 74-1-123 STN- BS57 DATE 30/ 8/74 GMT 22.1
POSITION 70-21.1N, 136-36.3W DEPTH 61

WIND DIR- 000 WAVE P/H AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1016.2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.05	5.65	0	4.54	2284.2	0.0	0.0	1415.
1	0.27	6.30	1	5.04	2234.7	0.23	0.00	1412.
3	-0.04	7.14	3	5.70	2168.9	0.67	0.01	1412.
5	-0.98	19.59	5	15.73	1187.0	1.04	0.02	1424.
7	-1.24	25.47	7	20.48	728.9	1.21	0.04	1430.
10	-1.35	27.39	10	22.03	580.3	1.40	0.05	1433.
15	-1.46	28.93	15	23.27	461.3	1.66	0.08	1434.
20	-1.55	29.98	20	24.13	380.0	1.87	0.12	1435.
30	-1.59	30.76	30	24.76	319.8	2.21	0.21	1436.
50	-1.43	31.90	50	25.68	231.6	2.76	0.43	1439.

REFERENCE NO. 74-1-124 STN- BS58 DATE 31/ 8/74 GMT 5.4
POSITION 70- 6.9N, 136-50.2W DEPTH 42

WIND DIR- 050 WAVE P/H AIR TEMP . WW
WIND SPD- 05 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.87	5.65	0	4.55	2282.5	0.0	0.0	1419.
1	1.75	6.30	1	5.08	2230.8	0.23	0.00	1419.
3	-0.14	7.25	3	5.78	2160.8	0.67	0.01	1411.
5	-0.84	16.66	5	13.37	1416.9	1.07	0.03	1420.
7	-1.28	25.60	7	20.58	719.2	1.26	0.04	1430.
10	-1.40	28.20	10	22.69	517.4	1.43	0.05	1433.
15	-1.52	29.54	15	23.77	414.1	1.66	0.08	1435.
20	-1.58	30.40	20	24.47	347.2	1.85	0.12	1436.
30	-1.59	31.34	30	25.23	274.9	2.16	0.19	1437.

REFERENCE NO. 74-1-125 STN- BS58 DATE 31/ 8/74 GMT 5.5
POSITION 70- 6.9N, 136-50.2W DEPTH 42

WIND DIR- 090 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1016.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	1.83	5.65	0	4.55	2282.6	0.0	0.0	1419.
1	1.63	6.38	1	5.13	2225.0	0.23	0.00	1419.
3	-0.01	6.77	3	5.40	2198.5	0.67	0.01	1411.
5	-0.90	16.52	5	13.26	1427.4	1.08	0.03	1420.
7	-1.26	25.35	7	20.38	738.5	1.28	0.04	1430.

REFERENCE NO. 74-1-126 STN- BS59 DATE 31/ 8/74 GMT 13.6
POSITION 69-56.2N, 137- 4.7W DEPTH 44

WIND DIR- 080 WAVE P/H AIR TEMP . WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1014.7

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.28	5.65	0	4.51	2286.9	0.0	0.0	1411.
1	0.25	6.30	1	5.04	2234.7	0.23	0.00	1412.
3	0.07	6.77	3	5.41	2198.1	0.67	0.01	1412.
5	-0.56	10.59	5	8.47	1896.0	1.09	0.03	1414.
7	-1.19	23.16	7	18.61	908.7	1.35	0.04	1427.
10	-1.34	26.26	10	21.12	667.9	1.58	0.06	1431.
15	-1.52	29.16	15	23.47	442.8	1.85	0.10	1434.
20	-1.58	30.25	20	24.35	358.8	2.05	0.13	1436.
30	-1.61	31.44	30	25.31	266.8	2.36	0.21	1437.

REFERENCE NO, 74-1-127 STN- BS60 DATE 1/ 9/74 GMT 3,5
POSITION 70- 5,4N, 139- 8,2W DEPTH 203

WIND DIR- 000 WAVE P/H AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1013,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,35	3,76	0	3,01	2435,7	0,0	0,0	1432,
1	5,04	3,89	1	3,12	2424,7	0,24	0,00	1431,
3	4,42	4,15	3	3,34	2402,7	0,73	0,01	1429,
5	0,68	17,66	5	14,19	1337,1	1,10	0,03	1429,
7	-1,25	25,58	7	20,57	720,6	1,28	0,04	1430,
10	-1,41	28,16	10	22,65	520,8	1,46	0,05	1433,
15	-1,52	29,30	15	23,57	432,5	1,70	0,08	1434,
20	-1,57	30,22	20	24,33	360,9	1,90	0,12	1436,
30	-1,62	31,15	30	25,08	289,2	2,22	0,20	1437,
50	-1,46	31,75	50	25,56	243,1	2,75	0,41	1439,
75	-1,52	32,21	75	25,93	207,4	3,31	0,76	1440,
100	-1,50	32,38	99	26,07	194,4	3,81	1,21	1440,
125	-1,47	32,56	124	26,21	180,7	4,27	1,74	1441,
150	-1,45	32,77	149	26,38	164,3	4,71	2,35	1442,
175	-1,33	33,09	174	26,64	140,1	5,10	2,99	1443,

REFERENCE NO, 74-1-128 STN- BS60 DATE 1/ 9/74 GMT 3,7
POSITION 70- 5,4N, 139- 8,2W DEPTH 203

WIND DIR- 000 WAVE P/H AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1013,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,58	3,76	0	3,00	2436,6	0,0	0,0	1433,
1	5,12	3,89	1	3,12	2425,0	0,24	0,00	1431,
3	4,20	4,15	3	3,35	2402,3	0,73	0,01	1428,
5	0,65	18,51	5	14,87	1271,1	1,09	0,02	1430,
7	-1,22	26,47	7	21,29	651,5	1,26	0,03	1432,
10	-1,42	28,28	10	22,75	511,2	1,43	0,05	1433,
15	-1,52	29,30	15	23,57	432,5	1,66	0,08	1434,
20	-1,57	30,23	20	24,33	360,2	1,86	0,11	1436,
30	-1,62	31,18	30	25,10	287,2	2,18	0,19	1437,
50	-1,46	31,78	50	25,58	241,0	2,71	0,41	1439,
75	-1,53	32,21	75	25,93	207,4	3,26	0,76	1440,
100	-1,51	32,42	99	26,10	191,6	3,76	1,20	1440,
125	-1,48	32,61	124	26,26	176,6	4,22	1,73	1441,
150	-1,47	32,82	149	26,43	160,2	4,64	2,32	1442,
175	-1,34	33,15	174	26,69	135,4	5,02	2,94	1443,

REFERENCE NO, 74-1-129   STN- BS60   DATE 1/ 9/74   GMT 4,2
POSITION 70- 5,5N, 139- 8,0W   DEPTH 203

WIND DIR- 315   WAVE P/H   AIR TEMP .   WW
WIND SPD- 10   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1013,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4,72	3,76	0	3,03	2434,0	0,0	0,0	1429,
1	4,63	3,89	1	3,13	2423,7	0,24	0,00	1429,
3	4,44	4,15	3	3,34	2402,7	0,73	0,01	1429,
5	0,73	17,64	5	14,17	1338,5	1,10	0,03	1429,
7	-1,21	25,62	7	20,60	717,2	1,28	0,04	1431,
10	-1,40	28,40	10	22,84	502,4	1,46	0,05	1434,
15	-1,51	29,62	15	23,83	408,0	1,68	0,08	1435,
20	-1,56	30,44	20	24,50	344,5	1,87	0,11	1436,
30	-1,61	31,36	30	25,25	272,8	2,17	0,19	1437,
50	-1,46	31,97	50	25,74	226,1	2,67	0,39	1439,
75	-1,52	32,40	75	26,08	193,2	3,19	0,72	1440,
100	-1,50	32,59	99	26,24	178,1	3,65	1,13	1441,
125	-1,45	32,77	124	26,38	164,4	4,08	1,62	1441,
150	-1,46	32,98	149	26,56	148,0	4,47	2,16	1442,
175	-1,28	33,33	174	26,84	121,3	4,82	2,73	1444,

REFERENCE NO, 74-1-130   STN- BS60   DATE 1/ 9/74   GMT 4,3
POSITION 70- 5,5N, 139- 8,0W   DEPTH 203

WIND DIR- 315   WAVE P/H   AIR TEMP .   WW
WIND SPD- 10   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1013,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,17	3,76	0	3,01	2435,1	0,0	0,0	1432,
1	5,10	3,74	1	3,00	2436,4	0,24	0,00	1431,
3	3,68	4,15	3	3,35	2401,6	0,73	0,01	1425,
5	-0,83	24,26	5	19,50	823,0	1,08	0,02	1431,
7	-1,30	27,50	7	22,12	571,5	1,21	0,03	1433,
10	-1,44	28,48	10	22,92	495,5	1,37	0,05	1434,
15	-1,52	29,48	15	23,72	418,2	1,60	0,08	1435,
20	-1,57	30,39	20	24,46	347,9	1,79	0,11	1436,

REFERENCE NO, 74-1-131 STN- BS61 DATE 1/ 9/74 GMT 15,6
POSITION 69-47,4N, 138-55,7W DEPTH 97

WIND DIR- 340 WAVE P/H AIR TEMP . WW
WIND SPD- 12 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1017,2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,04	3,76	0	3,02	2434,8	0,0	0,0	1431,
1	4,53	3,81	1	3,07	2429,8	0,24	0,00	1429,
3	4,08	4,15	3	3,35	2402,1	0,73	0,01	1427,
5	1,93	20,60	5	16,51	1111,6	1,05	0,02	1439,
7	-0,76	25,15	7	20,21	754,5	1,25	0,04	1432,
10	-1,41	29,04	10	23,37	452,5	1,41	0,05	1435,
15	-1,58	30,57	15	24,61	334,3	1,60	0,07	1436,
20	-1,60	31,06	20	25,01	296,2	1,76	0,10	1437,
30	-1,55	31,87	30	25,66	234,2	2,02	0,17	1438,
50	-1,49	32,42	50	26,11	191,4	2,43	0,33	1440,
75	-1,49	32,42	75	26,11	191,2	2,91	0,64	1440,

REFERENCE NO, 74-1-132 STN- BS62 DATE 1/ 9/74 GMT 19,2
POSITION 69-44,9N, 139-36,7W DEPTH 30

WIND DIR- 000 WAVE P/H AIR TEMP . WW
WIND SPD- 01 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1018,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,70	3,76	0	3,04	2432,3	0,0	0,0	1425,
1	3,68	3,74	1	3,03	2433,8	0,24	0,00	1425,
3	3,55	6,93	3	5,58	2181,5	0,72	0,01	1428,
5	-0,49	23,26	5	18,69	900,7	1,00	0,02	1431,
7	-1,25	27,41	7	22,04	579,0	1,14	0,03	1433,
10	-1,50	29,56	10	23,79	412,2	1,29	0,04	1435,
15	-1,62	31,05	15	24,99	297,5	1,46	0,06	1436,
20	-1,62	31,44	20	25,31	267,5	1,60	0,09	1437,

REFERENCE NO, 74-1-133   STN- BS62   DATE 1/ 9/74   GMT 19,3
POSITION 69-44,7N, 139-35,6W   DEPTH 30

WIND DIR- 000   WAVE P/H   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1018,1

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,66	3,70	0	3,00	2436,8	0,0	0,0	1425,
1	3,66	3,71	1	3,01	2436,0	0,24	0,00	1425,
3	3,59	4,10	3	3,32	2405,1	0,73	0,01	1425,
5	-0,70	23,32	5	18,74	896,4	1,08	0,02	1430,
7	-1,28	27,64	7	22,23	561,2	1,21	0,03	1433,
10	-1,50	29,57	10	23,80	411,5	1,36	0,05	1435,
15	-1,62	30,91	15	24,88	307,7	1,53	0,07	1436,
20	-1,63	31,30	20	25,20	277,7	1,68	0,09	1437,

REFERENCE NO, 74-1-134   STN- BS63   DATE 2/ 9/74   GMT 0,3
POSITION 69-27,0N, 138-48,5W   DEPTH 57

WIND DIR- 000   WAVE P/H   AIR TEMP .   WW
WIND SPD- 00   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 1018,2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,93	9,00	0	7,13	2028,0	0,0	0,0	1441,
1	5,79	9,00	1	7,14	2027,3	0,20	0,00	1441,
3	5,44	9,00	3	7,15	2025,5	0,61	0,01	1439,
5	2,45	10,83	5	8,71	1872,7	1,01	0,03	1428,
7	-1,14	27,21	7	21,89	594,2	1,22	0,04	1433,
10	-1,34	29,56	10	23,79	412,4	1,37	0,05	1436,
15	-1,52	30,89	15	24,86	309,9	1,54	0,07	1437,
20	-1,57	31,49	20	25,35	263,5	1,69	0,10	1437,
30	-1,62	32,27	30	25,98	203,5	1,92	0,16	1438,
50	-1,58	32,39	50	26,08	193,9	2,31	0,32	1439,

REFERENCE NO. 74-1-135 STN- BS64 DATE 2/ 9/74 GMT 15.4
POSITION 69-36.3N, 138-21.0W DEPTH 128

WIND DIR- 310 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1021.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.82	4.50	0	3.53	2384.0	0.0	0.0	1440.
1	6.82	4.50	1	3.53	2384.2	0.24	0.00	1440.
3	6.74	4.50	3	3.53	2383.6	0.72	0.01	1439.
5	4.60	5.80	5	4.65	2272.9	1.19	0.03	1432.
7	0.43	16.02	7	12.87	1465.4	1.58	0.05	1426.
10	-1.27	27.92	10	22.46	539.4	1.84	0.07	1434.
15	-1.54	30.22	15	24.33	361.0	2.05	0.10	1436.
20	-1.62	31.12	20	25.05	292.0	2.21	0.13	1437.
30	-1.57	31.74	30	25.55	244.4	2.47	0.20	1438.
50	-1.49	32.21	50	25.93	207.7	2.92	0.38	1439.
75	-1.49	32.35	75	26.04	197.3	3.42	0.70	1440.
100	-1.49	32.45	99	26.13	188.9	3.90	1.12	1440.

REFERENCE NO. 74-1-136 STN- BS65 DATE 2/ 9/74 GMT 21.0
POSITION 69-32.8N, 136-58.1W DEPTH 20

WIND DIR- 260 WAVE P/H AIR TEMP . WW
WIND SPD- 11 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1021.8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.31	4.50	0	3.63	2374.3	0.0	0.0	1429.
1	4.31	4.50	1	3.63	2374.5	0.24	0.00	1429.
3	4.16	4.50	3	3.63	2374.1	0.71	0.01	1428.
5	2.91	4.59	5	3.71	2366.1	1.19	0.03	1422.
7	0.45	8.32	7	6.67	2073.2	1.64	0.06	1416.
10	-1.23	26.98	10	21.70	611.8	1.94	0.08	1433.
15	-1.44	29.16	15	23.47	442.9	2.19	0.11	1435.

REFERENCE NO, 74-1-137   STN- BS66   DATE 3/ 9/74   GMT 2,6
POSITION 69-59,7N, 135-21,0W   DEPTH 31

WIND DIR- 315	WAVE P/H	AIR TEMP	.	WW
WIND SPD- 26	SWELL P/H	WET BLB	.	CLD-A
	SWELL D	BARO	1020,7	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,79	5,50	0	4,43	2294,5	0,0	0,0	1427,
1	3,79	5,50	1	4,43	2294,7	0,23	0,00	1427,
3	3,72	5,50	3	4,43	2294,4	0,69	0,01	1427,
5	3,64	5,69	5	4,59	2279,2	1,15	0,03	1427,
7	0,16	19,34	7	15,54	1206,0	1,53	0,05	1429,
10	-1,18	26,58	10	21,37	643,4	1,79	0,07	1432,
15	-1,46	29,11	15	23,42	447,0	2,05	0,11	1435,
20	-1,52	29,79	20	23,98	394,3	2,26	0,14	1435,

SPRING 75-1

Transmissiometer

In-Situ Salinometer

CTD Cast

Turbidity (% Transmittance)
Spring 75-1

Station #	Date	Time (GMT)	Depth (m)	% Transmittance
1	17-03-75	1930	2	106
			5	103
			10	108
			15	109
			25	108
2	17-03-75	2009	2	106
			5	114
			10	100
			15	100
			20	100
			25	100
			30	100
			40	100
			45	100
			50	100
			60	98
3	17-03-75	2048	3	82
			4	90
			5	100
			10	98
			15	104
			20	104
			25	109
			30	111
			50	109
			75	105
			90	104

In Situ Salinometer

Spring 75-1

Cruise Ref. No. 75-1 — STN. - BS01 — Position - 73°43'N 124°56'W
GMT: 21.5 — Depth: 28

Wind Dir.: 0	Wave P/H 0/0	Air Temp. -28.9	WW
Wind Spd.: 0	Swell P/H	Wet BLB	CLD-A
	Swell Dir.	Baro	

Date	Depth (m)	Temperature (°C)	Salinity ($^0/_{00}$)
16-03-75	1	-1.00	29.2
	2	-1.20	29.8
	3	-1.5	29.8
	4	-1.5	30.2
	5	-1.6	30.9
	7	-1.6	31.1
	10	-1.7	31.2
	15	-1.7	31.5
	20	-1.7	31.8
	25	-1.8	31.9
	28	-1.8	31.9

Cruise Ref. No. 75-1 — STN. - BSQ2 — Position: 73°43'N 124°56'W
GMT: 19.5 — Depth: 28

Wind Dir: 0	Wave P/H 0/0	Air Temp. -36.1	WW
Wind Spd: 0	Swell P/H	Wet BLB	CLD-A
	Swell Dir	Baro	

Date	Depth (m)	Temperature (°C)	Salinity ($^0/_{00}$)
17-03-75	2	-1.4	30.8
	5	-1.5	31.2
	10	-1.5	31.8
	15	-1.7	32.0
	20	-1.7	32.0
	25	-1.7	32.0

Cruise Ref. No. 75-1 STN. - BS03 Position: 73°43'N
GMT: 20.1 Depth: 68 125°49'W

Wind Dir:	Wave P/H:	Air Temp. -30.0	WW
Wind Spd:	Swell P/H:	Wet BLB	CLD.A: 0
	Swell Dir:	Baro	

Date	Depth (m)	Temperature (°C)	Salinity (°/₀₀)
17-03-75	3	-1.80	19.7
	5	-1.80	20.1
	10	-1.80	21.9
	15	-1.80	22.6
	20	-1.80	22.6
	25	-1.80	22.8
	30	-1.80	23.5
	40	-1.80	24.7
	50	-1.60	25.4
	60	-1.50	27.1
	68	-1.50	30.2

Cruise Ref. No. 75-1 STN. - BS04 Position: 73°43'N
GMT: 20.8 Depth: 110 126°35'W

Wind Dir:	Wave P/H	Air Temp	WW
Wind Spd:	Swell P/H	Wet BLB	CLD.A
	Swell Dir.	Baro	

Date	Depth (m)	Temperature (°C)	Salinity (°/₀₀)
17-03-75	3	-1.80	29.2
	5	-1.80	29.5
	10	-1.80	30.0
	15	-1.80	30.1
	20	-1.80	30.1
	25	-1.80	30.4
	30	-1.70	30.4
	50	-1.70	30.5
	75	-1.70	31.5
	90	-1.60	32.3
		-1.50	

Cruise Ref. No. 75-1 STN. - BS05 Position: 73°43'N
GMT: 21.9 Depth: 110 127°29'W

Wind Dir. Wave P/H Air Temp. -34.4 WW
Wind Spd. Swell P/H Wet BLB CLD.A
Swell Dir Baro

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
17-03-75	2	-2.00	25.5
	5	-1.80	30.9
	10	-1.80	25.5
	15	-1.80	31.1
	20	-1.80	25.5
	25	-1.70	31.1
	40	-1.65	31.8
	50	-1.65	31.8
	75	-1.65	32.6
	90	-1.50	32.7

Cruise Ref. No. 75-1 STN. - BSOA Position: 71°39'N
GMT: 4.5 Depth: 220 126°11'W

Wind Dir. Wave P/H Air Temp. WW
Wind Spd. Swell P/H Wet BLB CLD.A
Swell Dir. Baro

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	0	-1.00	29.1
	2	-1.50	30.5
	3	-1.50	30.9
	5	-1.50	31.1
	10	-1.60	31.1
	15	-1.60	31.1
	20	-1.60	31.2
	25	-1.60	31.3
	30	-1.60	31.3
	40	-1.50	31.3
	50	-1.40	31.3
	60	-1.25	31.3
	70	-1.20	32.1
	75	-1.10	32.3
	80	-1.10	32.3
	90	-1.10	32.7

Cruise Ref. No. 75-1	STN. - BSOA	Position:	71°39'N
GMT: 5.6	Depth: 220		126°11'W
Wind Dir:	Wave P/H	Air Temp.	WW
Wind Spd:	Swell P/H	Wet BLB	CLD.A
	Swell Dir.	Baro	

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	2	-1.50	31.3
	4	-1.60	31.3
	8	-1.70	31.3
	12	-1.70	31.3
	16	-1.70	31.3
	20	-1.70	31.3
	25	-1.70	31.3
	33	-1.70	31.3
	41	-1.50	31.6
	49	-1.25	32.0
	57	-1.20	32.4
	61	-1.20	32.6
	74	-1.15	32.7

Cruise Ref. No. 75-1	STN. - BSOA	Position:	71°39'N
GMT: 6.7	Depth:		126°11'W
Wind Dir.	Wave P/H	Air Temp.	WW
Wind Spd.	Swell P/H	Wet BLB	CLD.A
	Swell Dir.	Baro: 1020.0	

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	2	-1.50	31.3
	5	-1.50	31.3
	10	-1.50	31.3
	14	-1.50	31.3
	19	-1.60	31.3
	24	-1.60	31.3
	28	-1.65	31.3
	38	-1.65	31.3
	48	-1.35	31.6
	57	-1.20	32.0
	67	-1.15	32.3
	76	-1.10	32.6
	86	-1.10	32.7

Cruise Ref. No.: 75-1 | STN. - BSOA | Position: 71°39'N
GMT: 7.6 | Depth: 220 | 126°11'W

Wind Dir: | Wave P/H | Air Temp: | WW
Wind Spd: | Swell P/H | Wet BLB: | CLD.A
| Swell Dir: | Baro: 1021.0 |

Date	Depth (m)	Temperature (°C)	Salinity (⁰/₀₀)
20-03-75	2	-1.40	30.9
	5	-1.45	30.9
	10	-1.45	30.9
	14	-1.45	30.9
	19	-1.45	30.9
	24	-1.45	30.9
	28	-1.45	30.9
	38	-1.35	31.0
	48	-1.15	31.3
	57	-1.05	31.6
	67	-1.05	31.8
	71	-1.00	32.2
	76	-1.00	32.3
	86	-1.00	32.3

Cruise Ref. No.: 75-1 | STN. - BSOA | Position: 71°39'N
GMT: 8.5 | Depth: 220 | 126°11'W

Wind Dir: | Wave P/H | Air Temp: | WW
Wind Spd: | Swell P/H | Wet BLB: | CLD.A
| Swell Dir. | Baro: |

Date	Depth (m)	Temperature (°C)	Salinity (⁰/₀₀)
20-03-75	2	-1.55	30.7
	5	-1.80	30.7
	10	-1.70	31.0
	14	-1.70	31.0
	19	-1.70	31.0
	24	-1.75	31.1
	28	-1.80	31.1
	38	-1.85	31.1
	48	-1.55	31.2
	56	-1.50	31.4
	65	-1.50	31.9
	70	-1.50	31.9
	74	-1.50	32.0
	83	-1.50	32.1

Cruise Ref. No.: 75-1 | STN. - BSOA | Position: 71°39'N
GMT: 9.5 | Depth: 220 | 126°11'W

Wind Dir.: | Wave P/H | Air Temp. | WW
Wind Spd.: | Swell P/H | Wet BLB | CLD.A
Swell Dir. | Baro

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	2	-1.50	30.5
	5	-1.50	30.5
	10	-1.60	30.5
	15	-1.60	30.5
	19	-1.70	30.5
	24	-1.75	30.6
	28	-1.90	30.6
	38	-1.95	30.6
	47	-1.55	30.9
	56	-1.50	31.3
	66	-1.50	31.6
	70	-1.50	31.7
	75	-1.50	31.8
	85	-1.50	32.0

Cruise Ref. No.: 75-1 | STN. - BSOA | Position: 71°39'N
GMT: 10.6 | Depth: 220 | 126°11'W

Wind Dir.: | Wave P/H | Air Temp. | WW
Wind Spd.: | Swell P/H | Wet BLB | CLD.A
Swell Dir. | Baro

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	2	-1.55	30.9
	5	-1.60	30.9
	10	-1.80	30.6
	15	-1.80	30.6
	20	-1.85	30.8
	25	-1.85	30.6
	30	-1.80	30.7
	40	-1.80	30.7
	50	-1.55	31.1
	60	-1.50	31.4
	70	-1.50	31.5
	75	-1.50	32.0
	80	-1.50	32.0
	90	-1.50	32.0

Cruise Ref. No. 75-1 | STN. - BSOA | Position: 71°39'N
GMT: 11.5 | Depth: 220 | 126°11'W

Wind Dir:	Wave P/H	Air Temp	WW
Wind Spd:	Swell P/H	Wet BLB	CLD.A
	Swell Dir.	Baro	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
20-03-75	2	-1.70	30.5
	5	-1.65	30.5
	10	-1.70	30.5
	15	-1.75	30.5
	20	-1.75	30.5
	25	-1.80	30.6
	30	-1.75	30.6
	40	-1.70	30.7
	50	-1.60	30.9
	60	-1.50	31.3
	70	-1.45	31.5
	75	-1.40	31.8
	80	-1.40	31.8
	90	-1.40	32.0

Cruise Ref. No. 75-1 | STN. - BSOA | Position: 71°39'N
GMT: 12.5 | Depth: 220 | 126°11'W

Wind Dir:	Wave P/H	Air Temp.	WW
Wind Spd:	Swell P/H	Wet BLB	CLD.A
	Swell Dir.	Baro	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
20-03-75	2	-1.70	30.5
	5	-1.65	30.5
	10	-1.65	30.5
	15	-1.65	30.5
	20	-1.60	30.5
	25	-1.65	30.6
	30	-1.70	30.6
	40	-1.65	30.5
	50	-1.65	30.8
	60	-1.65	31.3
	70	-1.60	31.5
	75	-1.55	31.8
	80	-1.50	32.0
	90	-1.55	32.0

Cruise Ref. No. 75-1 STN. - BSOA Position: 71°39'N
GMT; 13.5 Depth: 220 126°11'W

Wind Dir.: 090 Wave P/H Air Temp. WW
Wind Spd.: 15 Swell P/H Wet BLB CLD-A
Swell Dir. Baro

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	2	-1.7	30.5
	5	-1.7	30.5
	9	-1.7	30.6
	13	-1.7	30.7
	17	-1.7	30.7
	22	-1.7	30.7
	26	-1.7	30.7
	35	-1.7	30.9
	43	-1.6	31.1
	52	-1.5	31.4
	61	-1.5	31.8
	65	-1.5	32.0
	70	-1.5	32.0
	78	-1.5	32.0

Cruise Ref. No. 75-1 STN. - BSOA Position: 71°39'N
GMT: 14.5 Depth: 220 126°11'W

Wind Dir.: Wave P/H Air Temp. WW
Wind Spd.: Swell P/H Wet BLB CLD.A
Swell Dir. Baro: 1022.0

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
20-03-75	2	-1.8	29.7
	5	-1.8	29.7
	9	-1.8	29.7
	14	-1.8	30.8
	18	-1.8	30.8
	23	-1.8	30.8
	27	-1.8	30.8
	36	-1.8	30.8
	45	-1.7	30.9
	54	-1.6	31.4
	63	-1.6	31.7
	73	-1.5	32.0
	82	-1.5	32.0

Cruise Ref. No. 75-1 STN. - BSOA Position: 71°39'N
GMT: 15.5 Depth: 220 126°11'W

Wind Dir: Wave P/H Air Temp. WW
Wind Spd.: Swell P/H Wet BLB CLD.A
Swell Dir. Baro

Date	Depth (m)	Temperature (°C)	Salinity (⁰/₀₀)
20-03-75	2	-1.8	29.7
	5	-1.8	30.5
	9	-1.8	30.5
	14	-1.8	30.5
	18	-1.8	30.5
	23	-1.8	30.5
	27	-1.8	30.5
	36	-1.8	30.5
	45	-1.7	31.1
	54	-1.6	31.3
	63	-1.5	31.6
	68	-1.5	31.6
	73	-1.5	32.0
	82	-1.5	32.0

Cruise Ref. No. 75-1 STN. - BS06 Position: 71°46'N
GMT: 23.5 Depth: > 90 m 126°34'W

Wind Dir.: 90 Wave P/H Air Temp. -24.4 WW
Wind Spd.: 20 Swell P/H Wet BLB CLD.A
Swell Dir. Baro

Date	Depth (m)	Temperature (°C)	Salinity (⁰/₀₀)
21-03-75	2	-1.8	30.5
	5	-1.7	30.5
	10	-1.7	30.5
	15	-1.7	30.5
	20	-1.7	30.5
	30	-1.7	30.5
	50	-1.7	30.9
	60	-1.6	31.3
	70	-1.6	31.5
	80	-1.6	31.6
	90	-1.55	31.9

Cruise Ref. No.: 75-1
GMT: 0.0

STN. - BS07
Depth: > 90 m

Position: 71°17'N
127°34'W

Wind Dir: 90
Wind Spd: 20

Wave P/H
Swell P/H
Swell Dir

Air Temp
Wet BLB
Baro

WW
CLD.A

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
22-03-75	2	-1.8	26.0
	5	-1.7	28.0
	10	-1.7	29.8
	15	-1.7	30.5
	20	-1.7	30.5
	30	-1.7	30.5
	50	-1.7	31.2
	60	-1.5	31.6
	70	-1.5	32.0
	90	-1.5	32.0

REFERENCE NO. 75-1- 1 STN- BSOA DATE 20/ 3/75 GMT 1.5
POSITION 71-39.0N, 126-11.0W DEPTH 220

WIND DIR- WAVE P/H AIR TEMP -30.0 WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 1020.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.71	31.12	0	25.06	291.3	0.0	0.0	1436.
1	-1.71	31.12	1	25.06	291.6	0.03	0.00	1436.
3	-1.71	31.12	3	25.06	291.6	0.09	0.00	1436.
5	-1.71	31.12	5	25.05	291.7	0.15	0.00	1436.
7	-1.71	31.12	7	25.05	291.8	0.20	0.01	1436.
10	-1.71	31.12	10	25.05	291.8	0.29	0.01	1436.
15	-1.71	31.12	15	25.05	292.0	0.44	0.03	1436.
20	-1.71	31.11	20	25.05	292.2	0.58	0.06	1436.
30	-1.71	31.11	30	25.04	292.5	0.88	0.13	1436.
50	-1.59	31.27	50	25.17	280.2	1.46	0.37	1437.
75	-1.40	32.12	74	25.86	214.7	2.07	0.75	1440.
100	-1.42	32.60	99	26.25	177.7	2.55	1.19	1441.
125	-1.39	32.90	124	26.48	155.0	2.97	1.66	1442.
150	-1.11	33.41	149	26.90	116.0	3.31	2.13	1444.
175	-0.70	33.85	174	27.23	84.3	3.55	2.54	1447.

REFERENCE NO. 75-1- 2 STN- BSOA DATE 20/ 3/75 GMT 19.0
POSITION 71-39.0N, 126-11.0W DEPTH 220

WIND DIR- 090 WAVE P/H AIR TEMP . WW
WIND SPD- 15 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1022.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.71	31.13	0	25.06	290.9	0.0	0.0	1436.
1	-1.71	31.13	1	25.06	291.2	0.03	0.00	1436.
3	-1.71	31.13	3	25.06	291.2	0.09	0.00	1436.
5	-1.71	31.13	5	25.06	291.2	0.15	0.00	1436.
7	-1.71	31.13	7	25.06	291.3	0.20	0.01	1436.
10	-1.71	31.12	10	25.05	291.6	0.29	0.01	1436.
15	-1.71	31.12	15	25.05	292.0	0.44	0.03	1436.
20	-1.71	31.11	20	25.05	292.2	0.58	0.06	1436.
30	-1.70	31.10	30	25.04	292.9	0.88	0.13	1436.
50	-1.48	31.49	50	25.35	263.2	1.45	0.36	1438.
75	-1.40	32.34	74	26.03	197.9	2.01	0.72	1440.
100	-1.43	32.83	99	26.44	159.8	2.44	1.10	1441.
125	-1.32	33.19	124	26.72	132.8	2.82	1.53	1443.
150	-1.07	33.55	149	27.00	105.7	3.12	1.95	1445.
175	-0.71	34.00	174	27.36	72.3	3.34	2.32	1447.
200	-0.33	34.35	198	27.62	47.5	3.50	2.61	1450.

Bottle Cast Data 75-1

Station	Date	Time (GMT)	Depth (m)	Temp. (^{o}C)	Salinity ($^{0}/_{00}$)
Ice Camp A	21-03-75	0020	1	-1.71	31.25
			10	-1.70	31.25
			20	-1.73	31.24
	20-03-75	2320	30	-1.58	31.26
			50	-1.41	31.91
			75	-1.43	32.58
			100	-1.43	32.92
			125	-1.30	33.37
			150	-0.85	33.87

SPRING 75-2

Transmissiometer

In-Situ Salinometer

CTD Casts

Bottle Casts

Turbidity (% Transmittance)
Spring 75-2

Station #	Date	Time (GMT)	Depth(m)	% Transmittance
B	26-04-75	1730	0	40
			1	49
			3	53
			5	57
			7	57
			10	56
			15	51
			20	48
B	26-04-75	2312	0	72
			1	71
			3	70
			5	65
			7	62
			10	61
			15	59
			20	52
B	27-04-75	1909	0	41
			1	38
			3	52
			5	59*
			7	63
			10	61
			15	52
			20	41
C	01-05-75	2126	0	67
			2	70
			3	78
			5	80
			7	81
			10	87
			15	91
			20	87
			25	78
			30	84
			35	92
			40	91
			50	38
			60	63

*Fluctuation - average value

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Turbidity (% Transmittance)
Spring 75-2 (Page Two)

Station #	Date	Time (GMT)	Depth (m)	% Transmittance
38	09-05-75	1935	1	2
			2	3
			3	3
			4	3
26	09-05-75	2015	0	37
			1	54
			2	52
			3	54
			5	76
			7	78
			10	78
			15	78
			20	71
			23	71
27	09-05-75	2100	0	33
			3	76
			5	81
			7	81
			10	86
			15	87
			20	87
			25	90
			30	92
			40	100
			44	98
			45	93
			50	58
28	09-05-75	2140	0	60
			1	70
			3	86
			5	100
			7	100
			10	104
			15	104
			20	106
			25	106
			30	106
			40	111
			50	98
			60	72

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Turbidity (T Transmittance)
Spring 75-2 (Page Three)

Station #	Date	Time (GMT)	Depth (m)	% Transmittance
29	09-05-75	2242	0	36
			1	64
			3	92
			5	101
			10	106
			15	110
			20	109
			25	110
			30	111
			40	114
			50	112
			60	111
			70	105
			75	100
			80	105
			88	100
30	09-05-75	2335	1	48
			3	64
			5	76
			10	100
			15	106
			20	106
			30	108
			50	111
			75	111
31	10-05-75	0039	0	101
			1	101
			3	102
			5	101
			7	102
			10	101
			15	102
			20	102
			30	102
			40	96
			50	102
32	10-05-75	0120	0	39
			1	61
			3	60
			5	74
			7	85
			10	89
			15	93
			20	96
			30	92
			35	90

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Turbidity (% Transmittance)
Spring 75-2 (Page Four)

Station #	Date	Time (GMT)	Depth (m)	% Transmittance
35	10-05-75	1624	2	30
			5	63
			7	74
			10	90
			15	106
			20	101
			25	95
			30	96
36	10-05-75	1719	0	11
			1	23
			3	38
			5	68
			7	75
			10	80
			15	97
			20	96
			25	89
			30	62
			35	55

In Situ Salinometer
Spring 75-2

Cruise Ref. No.: 75-2 Stn.: BSOB Position: 69 56.8'N
GMT: 5.1 Depth: 21 m. 133 25.4'W

Wind Dir.:	Wave P/H:	Air Temp.:	WW:
Wind Spd.:	Swell P/H:	Wet BLB:	CLD.A:
	Swell Dir:	Baro:	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
25-04-75	0	-0.3	4.4
	1	-0.4	4.3
	3	-0.4	4.5
	5	-1.5	27.7
	7	-1.5	29.5
	10	-1.6	30.0
	15	-1.7	30.4
	20	-1.7	30.5

Cruise Ref. No.: 75-2 Stn.: BSOB Position: 69°56.8'N
GMT: 3.2 Depth: 21 m. 133°25.4'W

Wind Dir.:	Wave P/H:	Air Temp:	WW
Wind Spd.:	Swell P/H:	Wet BLB:	CLD.A:
	Swell Dir.:	Baro: 999.0	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
26-04-75	0	-0.3	4.4
	1	-0.3	4.4
	3	-0.3	4.4
	5	-1.0	26.2
	7	-1.5	29.4
	10	-1.6	29.8
	15	-1.6	30.4
	20	-1.6	30.5

In Situ Salinometer
Spring 75-2 (Page 2)

Cruise Ref. No.: 75-2 | Stn.: BSOB | Position 69°56.8'N 133°25.4'W
GMT: 4.2 | Depth: 21 m.

Wind. Dir.: 090	Wave P/H:	Air Temp.:	WW:
Wind Spd.: 8	Swell P/H:	Wet BLB:	CLD.A
	Swell Dir.:	Baro: 998.2	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
26-04-75	0	-0.1	4.4
	1	-0.1	4.4
	3	-0.3	4.4
	5	-1.3	27.8
	7	-1.5	29.4
	10	-1.5	29.8
	15	-1.6	30.4
	20	-1.7	30.5

Cruise Ref. No.: 75-2 | Stn: BS08 | Position: 70°44.0'N 133°32.3'W
GMT: 01.2 | Depth: 66 m.

Wind. Dir.:	Wave P/H:	Air Temp.:	WW
Wind Spd.:	Swell P/H:	Wet BLB:	CLD.A
	Swell Dir.:	Baro.:	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
27-04-75	0	-0.5	29.0
	3	-1.1	29.2
	5	-1.4	30.2
	10	-1.5	30.3
	15	-1.6	30.5
	20	-1.6	30.5
	30	-1.8	30.5
	50	-1.8	31.2
	60	-1.5	31.6
	66	-1.5	31.9

In Situ Salinometer
Spring 75-2 (Page 3)

Cruise Ref. No.: 75-2 Stn.: BS09 Position: 71°03.6'N
GMT: 2.5 Depth: 75 m 133°36.3'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
27-04-75	0	-1.5	30.2
	5	-1.6	30.5
	10	-1.8	30.9
	15	-1.8	30.9
	20	-1.8	30.9
	25	-1.8	30.9
	30	-1.6	30.9
	40	-1.6	30.9
	50	-1.6	30.9
	75	-1.5	31.8

Cruise Ref. No.: 75-2 Stn.: BS10 Position: 70°20.4'N
GMT: 3.1 Depth: 50 m. 133°32.8'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A.:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
27-04-75	0	-1.3	29.7
	5	-1.5	29.8
	10	-1.5	30.0
	15	-1.6	30.2
	20	-1.6	30.2
	25	-1.7	30.3
	30	-1.7	30.5
	40	-1.6	30.5
	50	-1.5	31.6

In Situ Salinometer
Spring 75-2 (Page 4)

Cruise Ref. No.: 75-2 Stn.: BS11 Position: 69°57.4'N
GMT: 19.3 Depth: 22 m. 135°01.8'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
28-04-75	0	-0.2	16.7
	1	-0.5	17.0
	2	-0.5	19.1
	5	-1.2	27.7
	10	-1.5	29.5
	15	-1.6	29.8
	20	-1.7	30.4
	22	-1.7	30.4

Cruise Ref. No.: 75-2 Stn.: BS12 Position: 70°08.6'N
GMT: 19.8 Depth: 36 m 135°00.8'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H; Wet BLB: CLD.A
Swell Dir.:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
28-04-75	0	-0.8	15.5
	1	-0.9	16.9
	2	-1.2	21.5
	5	-1.3	27.8
	10	-1.7	29.8
	15	-1.7	30.0
	20	-1.8	30.2
	21	-1.8	30.2

In Situ Salinometer
Spring 75-2 (Page 5)

Cruise Ref. No.: 75-2
GMT: 20.4

Stn.: BS13
Depth: 38m

Position: 70°12.5'N
135°00.7'W

Wind Dir.:
Wind Spd.:

Wave P/H:
Swell P/H:
Swell Dir.:

Air Temp:
Wet BLB:
Baro:

WW:
CLD.A:

Date	Depth (m)	Temperature (°C)	Salinity (°/00)
28-04-75	0	-1.3	24.1
	1	-1.3	25.0
	2	-1.3	25.8
	5	-1.4	29.0
	10	-1.7	29.8
	15	-1.8	30.3
	20	-1.8	30.5
	25	-1.8	30.5

Cruise Ref. No.: 75-2
GMT: 20.8

Stn.: BS14
Depth: 51 m.

Position: 70°17.8'N
135°00.7'W

Wind Dir.:
Wind Spd.:

Wave P/H:
Swell P/H:
Swell Dir.:

Air Temp.:
Wet BLB:
Baro:

WW:
CLD.A:

Date	Depth (m)	Temperature (°C)	Salinity (°/00)
28-04-75	0	-0.9	29.8
	1	-1.4	29.8
	2	-1.4	29.9
	5	-1.6	30.0
	10	-1.8	30.1
	15	-1.8	30.1
	20	-1.8	30.1
	25	-1.8	30.2
	30	-1.8	30.4
	40	-1.5	31.3
	45	-1.6	31.3

In Situ Salinometer
Spring 75-2 (Page 6)

Cruise Ref. No.: 75-2 Stn.: BS15 Position: 70°23.4'N
GMT: 21.2 Depth: 56 m. 135°00.1'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A
Swell Dir.:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
28-04-75	0	-1.0	29.7
	1	-1.1	29.8
	5	-1.1	29.8
	10	-1.1	30.0
	15	-1.1	30.1
	20	-1.6	30.1
	25	-1.6	30.2
	30	-1.7	30.4
	40	-1.8	31.1
	50	-1.8	31.6
	54	-1.8	31.6

Cruise Ref. No.: 75-2 Stn.: BS16 Position: 70°33.9'N
GMT: 21.5 Depth: 60 m. 134°58.7'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
28-04-75	0	-0.8	30.2
	1	-1.5	29.7
	5	-1.7	29.8
	10	-1.8	29.8
	15	-1.8	29.8
	20	-1.8	29.8
	25	-1.7	29.8
	30	-1.7	30.2
	40	-1.8	31.3
	50	-1.8	31.7
	57	-1.6	31.8

In Situ Salinometer
Spring 75-2 (Page 7)

Cruise Ref. No.: 75-2 Stn.: BS17 Position: 70°43.7'N
GMT: 22.1 Depth: 76 m. 135°00.2'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
28-04-75	0	-0.8	29.7
	1	-1.5	30.0
	5	-1.65	30.4
	10	-1.75	30.4
	15	-1.8	30.4
	20	-1.8	30.4
	25	-1.8	30.5
	30	-1.8	30.5
	39	-1.8	30.9
	49	-1.7	31.5
	59	-1.65	31.8
	69	-1.65	32.0

Cruise Ref. No.: 75-2 Stn.: BS18 Position: 70°13.3'N
GMT: 1.3 Depth: 23 m. 131°21.5'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
29-04-75	0	-0.6	17.0
	1	-0.25	17.0
	2	-0.8	21.9
	3	-0.75	26.0
	5	-1.3	28.5
	10	-1.6	30.5
	15	-1.7	30.5
	20	-1.8	30.8

In Situ Salinometer
Spring 75-2 (Page 8)

Cruise Ref. No.: 75-2 Stn.: BS19 Position: 70°27.8'N 131°20.4'W
GMT: 1.8 Depth: 32 m.

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H; Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
29-04-75	0	-1.5	30.0
	1	-1.65	30.0
	2	-1.75	30.4
	5	-1.8	30.5
	10	-1.8	30.5
	15	-1.8	30.7
	20	-1.8	30.75
	30	-1.8	30.9
	32	-1.8	30.9

Cruise Ref. No.: 75-2 Stn.: BS20 Position: 70°38.4'N 131°28.2'W
GMT: 2.2 Depth: 49 m.

Wind Dir.: Wave P/H: Air Temp: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
29-04-75	0	0.00	29.0
	1	-1.0	29.8
	5	-1.3	29.8
	10	-1.3	29.8
	15	-1.7	29.8
	20	-1.8	29.8
	30	-1.8	29.8
	40	-1.8	30.4
	49	-1.8	30.5

Cruise Ref. No.: 75-2 Stn.: BSOC Position: 69°36.7'N
GMT: 16.9 Depth: 76 m. 137°58.1'W

Wind Dir.: Wave P/H: Air Temp: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/₀₀)
04-05-75	0	-1.7	23.7
	1	-1.8	26.8
	2	-1.8	26.9
	3	-1.8	26.9
	5	-1.8	27.1
	7	-1.8	29.1
	10	-1.9	30.4
	15	-2.0	30.4
	20	-2.1	30.4
	30	-1.8	31.4
	40	-1.7	31.8
	50	-1.6	32.1
	60	-1.6	32.6
	70	-1.6	32.7
	75	-1.6	32.7

Cruise Ref. No.: 75-2 Stn.: BSOC Position: 69°36.7'N
GMT: 18.2 Depth: 76 m. 137°58.1'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/₀₀)
04-05-75	1	-1.8	27.1
	2	-1.8	27.3
	3	-1.9	27.1
	5	-1.9	27.3
	7	-2.1	29.7
	10	-2.1	30.4
	15	-2.1	30.5
	20	-2.1	30.5
	25	-1.8	31.0
	30	-1.8	31.5
	40	-1.8	32.0
	45	-1.8	32.2
	50	-1.8	32.3
	60	-1.7	32.6
	70	-1.8	32.6
	75	-1.7	32.7

In Situ Salinometer
Spring 75-2 (Page 10)

Cruise Ref. No.: 75-2 Stn.: BS28 Position: 70°43.8'N
GMT: 21.7 Depth: 60 133°26.8'W

Wind Dir.: Wave P/H: Air Temp: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
09-05-75	0	-1.5	30.0
	1	-1.6	30.0
	3	-1.8	30.3
	5	-1.8	30.3
	7	-1.8	30.3
	10	-1.8	30.3
	20	-1.9	30.5

Cruise Ref. No.: 75-2 Stn.: BS38 Position: 69°37.0'N
GMT: 19.5 Depth: 5 133°18.0'W

Wind Dir.: Wave P/H: Air Temp.: WW:
Wind Spd.: Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
09-05-75	0	0.6	<1.0
	1	0.2	<1.0
	2	0.1	<1.0
	3	0.0	<1.0
	4	-0.1	<1.0
	5	-0.1	<1.0

REFERENCE NO. 75-2- 1 STN- BSOB DATE 26/ 4/75 GMT 0,3
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,57	30,46	0	24,52	342,7	0,0	0,0	1436.
1	-1,58	30,47	1	24,53	341,8	0,03	0,00	1436.
3	-1,60	30,57	3	24,61	334,5	0,10	0,00	1436.
5	-1,65	30,84	5	24,82	313,8	0,17	0,00	1436.
7	-1,66	31,00	7	24,95	301,4	0,23	0,01	1436.
10	-1,66	31,15	10	25,07	289,8	0,32	0,02	1436.
15	-1,68	31,37	15	25,26	272,2	0,46	0,03	1437.

REFERENCE NO. 75-2- 2 STN- BSOB DATE 26/ 4/75 GMT 0,4
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- 090	WAVE P/H	AIR TEMP .	WW
WIND SPD- 13	SWELL P/H	WET BLB .	CLD-A 2
	SWELL D	BARO 1000,0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,80	5,17	0	4,06	2331,3	0,0	0,0	1405.
1	-0,74	5,11	1	4,02	2335,9	0,23	0,00	1405.
3	-0,61	4,95	3	3,90	2347,6	0,70	0,01	1406.
5	-0,89	20,49	5	16,46	1116,4	1,12	0,03	1425.
7	-1,31	29,04	7	23,36	452,9	1,25	0,04	1435.
10	-1,43	30,32	10	24,40	354,0	1,37	0,05	1436.
15	-1,52	30,91	15	24,88	307,8	1,53	0,07	1437.
20	-1,54	31,16	20	25,08	289,2	1,68	0,09	1437.

REFERENCE NO. 75-2- 3 STN- BS0B DATE 26/ 4/75 GMT 2.9
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.01	4.79	0	3.80	2357.0	0.0	0.0	1409.
1	-0.12	4.81	1	3.81	2356.3	0.24	0.00	1408.
3	-0.27	4.77	3	3.77	2359.9	0.71	0.01	1407.
5	-1.15	21.23	5	17.05	1059.1	1.13	0.03	1425.
7	-1.54	29.26	7	23.55	435.4	1.25	0.03	1434.
10	-1.60	30.20	10	24.30	363.0	1.36	0.04	1435.
15	-1.63	30.67	15	24.68	326.8	1.53	0.07	1436.
20	-1.64	30.96	20	24.93	303.8	1.69	0.09	1436.

REFERENCE NO. 75-2- 4 STN- BS0B DATE 26/ 4/75 GMT 3.0
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.18	4.79	0	3.79	2358.0	0.0	0.0	1408.
1	-0.23	4.80	1	3.79	2357.8	0.24	0.00	1407.
3	-0.26	4.80	3	3.80	2357.5	0.71	0.01	1407.
5	-1.19	22.48	5	18.06	961.7	1.13	0.03	1426.
7	-1.53	29.40	7	23.66	424.7	1.24	0.03	1434.
10	-1.59	30.26	10	24.36	357.9	1.35	0.04	1435.
15	-1.63	30.77	15	24.77	318.6	1.52	0.07	1436.

REFERENCE NO, 75-2- 5 STN- BS0B DATE 26/ 4/75 GMT 4,5
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- 090 WAVE P/H AIR TEMP . WW
WIND SPD- 08 SWELL P/H WET BLB . CLD-A
SWELL D BARO 998,2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0,02	4,82	0	3,82	2354,8	0,0	0,0	1409,
1	-0,08	4,81	1	3,81	2356,1	0,24	0,00	1408,
3	-0,25	4,83	3	3,82	2355,3	0,71	0,01	1407,
5	-1,09	20,63	5	16,57	1106,0	1,14	0,03	1424,

REFERENCE NO, 75-2- 6 STN- BS0B DATE 26/ 4/75 GMT 5,3
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,18	4,76	0	3,77	2360,6	0,0	0,0	1408,
1	-0,23	4,77	1	3,77	2360,3	0,24	0,00	1407,
3	-0,25	4,80	3	3,80	2357,6	0,71	0,01	1407,
5	-1,10	22,80	5	18,32	936,7	1,13	0,03	1427,
7	-1,50	29,26	7	23,54	435,9	1,24	0,03	1434,
10	-1,57	29,98	10	24,13	379,9	1,36	0,04	1435,
15	-1,60	30,38	15	24,45	349,2	1,54	0,07	1436,
20	-1,61	30,64	20	24,67	328,6	1,71	0,10	1436,

REFERENCE NO, 75-2- 7 STN- BS08 DATE 26/ 4/75 GMT 6,2
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- 135 WAVE P/H AIR TEMP . WW
WIND SPD- 08 SWELL P/H WET BLB . CLD-A
SWELL D BARO 997,8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,17	4,85	0	3,84	2353,3	0,0	0,0	1408,
1	-0,22	4,83	1	3,82	2355,1	0,24	0,00	1408,
3	-0,24	4,77	3	3,77	2360,1	0,71	0,01	1407,
5	-0,95	21,02	5	16,88	1075,4	1,14	0,03	1426,
7	-1,49	29,03	7	23,35	453,7	1,26	0,04	1434,
10	-1,56	29,90	10	24,07	385,7	1,38	0,05	1435,
15	-1,59	30,37	15	24,44	349,6	1,56	0,07	1436,
20	-1,60	30,60	20	24,63	332,0	1,73	0,10	1436,

REFERENCE NO, 75-2- 8 STN- BS08 DATE 26/ 4/75 GMT 7,1
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,27	4,50	0	3,55	2381,7	0,0	0,0	1407,
1	-0,27	4,50	1	3,55	2381,9	0,24	0,00	1407,
3	-0,26	4,41	3	3,48	2389,1	0,72	0,01	1407,
5	-0,93	14,23	5	11,41	1608,0	1,17	0,03	1417,
7	-1,41	25,71	7	20,67	710,5	1,36	0,04	1430,
10	-1,54	27,44	10	22,07	576,1	1,55	0,06	1432,
15	-1,61	28,48	15	22,92	495,4	1,81	0,09	1433,
20	-1,62	29,00	20	23,34	454,9	2,05	0,13	1434,

REFERENCE NO. 75-2- 9 STN- BSOB DATE 26/ 4/75 GMT 8.3
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.23	4.83	0	3.82	2355.3	0.0	0.0	1408.
1	-0.23	4.85	1	3.84	2353.6	0.24	0.00	1408.
3	-0.24	4.86	3	3.84	2352.8	0.71	0.01	1408.
5	-1.12	17.58	5	14.11	1344.6	1.14	0.03	1420.
7	-1.49	29.14	7	23.45	444.9	1.27	0.04	1434.
10	-1.57	30.16	10	24.28	365.8	1.39	0.05	1435.
15	-1.63	30.59	15	24.62	333.1	1.57	0.07	1436.

REFERENCE NO. 75-2- 10 STN- BSOB DATE 26/ 4/75 GMT 9.0
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.23	4.89	0	3.87	2350.5	0.0	0.0	1408.
1	-0.23	4.89	1	3.87	2350.5	0.24	0.00	1408.
3	-0.25	4.83	3	3.82	2355.2	0.71	0.01	1407.
5	-0.95	18.43	5	14.80	1277.4	1.15	0.03	1422.
7	-1.51	28.80	7	23.17	471.2	1.28	0.04	1434.
10	-1.60	30.08	10	24.21	371.9	1.40	0.05	1435.
15	-1.65	30.47	15	24.52	342.1	1.58	0.07	1435.
20	-1.64	30.67	20	24.69	326.5	1.75	0.10	1436.

REFERENCE NO, 75-2- 11 STN- BS0B DATE 26/ 4/75 GMT 10,1
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- 090 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A
SWELL D BARO 996,4

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,23	4,86	0	3,84	2352,9	0,0	0,0	1408,
1	-0,23	4,81	1	3,80	2356,9	0,24	0,00	1408,
3	-0,25	4,80	3	3,80	2357,7	0,71	0,01	1407,
5	-1,20	22,66	5	18,21	947,4	1,11	0,03	1427,
7	-1,52	29,03	7	23,36	453,7	1,23	0,03	1434,
10	-1,57	30,02	10	24,16	376,6	1,35	0,04	1435,
15	-1,64	30,49	15	24,54	340,5	1,53	0,07	1436,
20	-1,62	30,69	20	24,70	325,3	1,70	0,10	1436,

REFERENCE NO, 75-2- 12 STN- BS0B DATE 26/ 4/75 GMT 11,1
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,23	4,89	0	3,87	2350,4	0,0	0,0	1408,
1	-0,23	4,89	1	3,87	2350,5	0,24	0,00	1408,
3	-0,24	4,83	3	3,82	2355,3	0,71	0,01	1408,
5	-1,15	24,17	5	19,43	829,9	1,12	0,03	1429,
7	-1,52	29,32	7	23,59	431,1	1,22	0,03	1434,
10	-1,57	30,10	10	24,22	370,8	1,34	0,04	1435,
15	-1,63	30,52	15	24,57	338,1	1,52	0,07	1436,
20	-1,61	30,72	20	24,73	322,7	1,68	0,10	1436,

REFERENCE NO, 75-2- 13   STN- BS08   DATE 26/ 4/75   GMT 12,2
POSITION 69-56,8N, 133-25,0W   DEPTH 21

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,90	4,75	0	3,72	2365,3	0,0	0,0	1404,
1	-0,37	4,67	1	3,68	2369,0	0,24	0,00	1407,
3	-0,25	4,65	3	3,67	2369,7	0,71	0,01	1407,
5	-1,28	24,92	5	20,03	771,9	1,12	0,03	1429,
7	-1,54	29,07	7	23,39	449,8	1,23	0,03	1434,
10	-1,58	29,85	10	24,02	390,0	1,35	0,04	1435,
15	-1,64	30,30	15	24,39	354,7	1,54	0,07	1435,
20	-1,61	30,53	20	24,57	337,3	1,71	0,10	1436,

REFERENCE NO, 75-2- 14   STN- BS08   DATE 26/ 4/75   GMT 13,1
POSITION 69-56,8N, 133-25,0W   DEPTH 21

WIND DIR- 110   WAVE P/H   AIR TEMP .   WW
WIND SPD- 06   SWELL P/H   WET BLB .   CLD-A 1
SWELL D   BARO 996,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,22	4,83	0	3,82	2355,4	0,0	0,0	1408,
1	-0,22	4,80	1	3,80	2357,4	0,24	0,00	1408,
3	-0,24	4,83	3	3,82	2355,4	0,71	0,01	1408,
5	-1,24	25,34	5	20,38	738,8	1,11	0,03	1430,
7	-1,52	29,10	7	23,41	448,0	1,22	0,03	1434,
10	-1,56	30,01	10	24,15	377,3	1,34	0,04	1435,
15	-1,60	30,45	15	24,51	343,8	1,52	0,07	1436,
20	-1,60	30,67	20	24,69	326,3	1,69	0,10	1436,

REFERENCE NO, 75-2- 15 STN- BS08 DATE 26/ 4/75 GMT 14,2
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,23	5,10	0	4,04	2333,4	0,0	0,0	1408,
1	-0,23	5,05	1	4,00	2337,5	0,23	0,00	1408,
3	-0,24	4,98	3	3,94	2343,2	0,70	0,01	1408,
5	-1,30	25,68	5	20,65	712,5	1,12	0,03	1430,
7	-1,53	29,51	7	23,74	416,4	1,22	0,03	1435,
10	-1,56	30,27	10	24,36	357,6	1,33	0,04	1436,
15	-1,60	30,74	15	24,75	320,9	1,50	0,06	1436,
20	-1,61	31,01	20	24,96	300,6	1,65	0,09	1437,

REFERENCE NO, 75-2- 16 STN- BS08 DATE 26/ 4/75 GMT 15,3
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,25	4,86	0	3,85	2352,7	0,0	0,0	1407,
1	-0,25	4,86	1	3,85	2352,9	0,24	0,00	1407,
3	-0,26	4,83	3	3,82	2355,2	0,71	0,01	1407,
5	-0,84	17,99	5	14,45	1311,7	1,15	0,03	1422,
7	-1,56	29,36	7	23,62	428,0	1,27	0,04	1434,
10	-1,60	30,23	10	24,33	360,4	1,38	0,05	1435,
15	-1,63	30,70	15	24,71	324,3	1,55	0,07	1436,
20	-1,64	30,92	20	24,89	306,9	1,71	0,10	1436,

REFERENCE NO, 75-2- 17 STN- BS08 DATE 26/ 4/75 GMT 16,2
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,24	4,83	0	3,82	2355,2	0,0	0,0	1407,
1	-0,24	4,83	1	3,82	2355,4	0,24	0,00	1407,
3	-0,25	4,80	3	3,80	2357,6	0,71	0,01	1407,
5	-1,07	20,96	5	16,84	1080,0	1,14	0,03	1425,
7	-1,56	29,35	7	23,62	428,4	1,25	0,03	1434,
10	-1,58	30,07	10	24,20	373,1	1,36	0,04	1435,
15	-1,61	30,53	15	24,57	337,2	1,54	0,07	1436,
20	-1,62	30,72	20	24,73	322,5	1,71	0,10	1436,

REFERENCE NO, 75-2- 18 STN- BS08 DATE 26/ 4/75 GMT 17,1
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,26	4,47	0	3,53	2384,2	0,0	0,0	1407,
1	-0,26	4,47	1	3,53	2384,3	0,24	0,00	1407,
3	-0,26	4,35	3	3,43	2393,9	0,72	0,01	1407,
5	-0,97	6,35	5	5,01	2237,3	1,19	0,03	1406,
7	-1,39	23,44	7	18,84	886,5	1,48	0,05	1427,
10	-1,50	26,97	10	21,69	612,7	1,69	0,07	1431,
15	-1,56	28,95	15	23,30	459,2	1,96	0,10	1434,
20	-1,59	29,78	20	23,97	395,0	2,17	0,14	1435,

REFERENCE NO, 75-2- 19   STN- BSOB   DATE 26/ 4/75   GMT 18,3
POSITION 69-56,8N, 133-25,0W   DEPTH 21

WIND DIR- 0   WAVE P/H   AIR TEMP .   WW
WIND SPD- 0   SWELL P/H   WET BLB .   CLD-A 3
SWELL D   BARO 996,5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,11	4,81	0	3,81	2356,2	0,0	0,0	1408,
1	-0,18	4,80	1	3,80	2357,7	0,24	0,00	1408,
3	-0,24	4,77	3	3,77	2360,2	0,71	0,01	1407,
5	-1,03	20,13	5	16,17	1144,6	1,14	0,03	1424,
7	-1,49	29,03	7	23,36	453,1	1,26	0,04	1434,
10	-1,56	30,04	10	24,18	375,1	1,38	0,05	1435,
15	-1,59	30,41	15	24,47	347,0	1,56	0,07	1436,
20	-1,61	30,60	20	24,63	331,7	1,73	0,10	1436,

REFERENCE NO, 75-2- 20   STN- BSOB   DATE 26/ 4/75   GMT 18,9
POSITION 69-56,8N, 133-25,0W   DEPTH 21

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,11	4,75	0	3,76	2361,1	0,0	0,0	1408,
1	-0,16	4,76	1	3,76	2360,9	0,24	0,00	1408,
3	-0,23	4,74	3	3,75	2362,6	0,71	0,01	1407,
5	-1,08	16,67	5	13,37	1416,3	1,15	0,03	1419,
7	-1,52	29,03	7	23,36	453,7	1,27	0,04	1434,
10	-1,56	29,90	10	24,07	385,7	1,40	0,05	1435,
15	-1,60	30,38	15	24,45	348,8	1,58	0,07	1436,
20	-1,61	30,53	20	24,57	337,3	1,75	0,10	1436,

REFERENCE NO. 75-2- 21 STN- BS0B DATE 26/ 4/75 GMT 20.2
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- 300 WAVE P/H AIR TEMP . WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A 4
SWELL D BARO 997.4

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.10	4.72	0	3.74	2363.5	0.0	0.0	1408.
1	-0.15	4.73	1	3.74	2363.3	0.24	0.00	1408.
3	-0.23	4.77	3	3.77	2360.3	0.71	0.01	1408.
5	-1.12	22.50	5	18.08	960.2	1.13	0.03	1427.
7	-1.51	29.09	7	23.41	448.7	1.24	0.03	1434.
10	-1.53	29.69	10	23.89	402.5	1.37	0.05	1435.
15	-1.61	30.28	15	24.37	356.9	1.56	0.07	1435.
20	-1.59	30.40	20	24.47	346.9	1.73	0.10	1436.

REFERENCE NO. 75-2- 22 STN- BS0B DATE 26/ 4/75 GMT 21.0
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.15	4.76	0	3.76	2360.7	0.0	0.0	1408.
1	-0.18	4.74	1	3.75	2362.7	0.24	0.00	1408.
3	-0.23	4.83	3	3.82	2355.4	0.71	0.01	1408.
5	-1.13	23.17	5	18.62	907.8	1.11	0.03	1428.
7	-1.52	29.28	7	23.56	434.2	1.22	0.03	1434.
10	-1.55	29.96	10	24.11	381.1	1.34	0.04	1435.
15	-1.60	30.34	15	24.42	351.9	1.52	0.07	1436.
20	-1.60	30.52	20	24.57	338.0	1.69	0.10	1436.

REFERENCE NO. 75-2- 23 STN- BS0B DATE 26/ 4/75 GMT 22.1
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.18	4.76	0	3.77	2360.5	0.0	0.0	1408.
1	-0.19	4.76	1	3.77	2360.6	0.24	0.00	1408.
3	-0.23	4.74	3	3.75	2362.6	0.71	0.01	1407.
5	-1.04	22.02	5	17.69	997.6	1.12	0.03	1427.
7	-1.52	29.06	7	23.38	451.2	1.24	0.03	1434.
10	-1.55	29.89	10	24.06	386.7	1.36	0.04	1435.
15	-1.61	30.27	15	24.37	357.1	1.54	0.07	1435.
20	-1.61	30.46	20	24.51	342.9	1.72	0.10	1436.

REFERENCE NO. 75-2- 24 STN- BS0B DATE 26/ 4/75 GMT 23.2
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- 300 WAVE P/H AIR TEMP . WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A 9
SWELL D BARO 998.9

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.20	4.76	0	3.77	2360.3	0.0	0.0	1408.
1	-0.21	4.72	1	3.73	2364.4	0.24	0.00	1407.
3	-0.23	4.65	3	3.67	2369.9	0.71	0.01	1407.
5	-1.14	22.93	5	18.43	926.5	1.14	0.03	1427.
7	-1.52	28.69	7	23.09	479.3	1.26	0.03	1434.
10	-1.55	29.64	10	23.85	406.3	1.39	0.05	1435.
15	-1.61	30.09	15	24.22	371.2	1.58	0.07	1435.
20	-1.61	30.24	20	24.34	359.9	0.44	-0.15	1435.

REFERENCE NO. 75-2- 25 STN- BS08 DATE 27/ 4/75 GMT 0.1
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.20	4.85	0	3.84	2353.1	0.0	0.0	1408.
1	-0.20	4.83	1	3.82	2355.2	0.24	0.00	1408.
3	-0.23	4.80	3	3.79	2357.8	0.71	0.01	1408.
5	-1.35	25.55	5	20.55	722.7	1.09	0.03	1430.
7	-1.52	29.06	7	23.38	451.2	1.20	0.03	1434.
10	-1.55	29.82	10	24.00	392.2	1.32	0.04	1435.
15	-1.59	30.29	15	24.38	355.9	1.51	0.07	1436.
20	-1.60	30.45	20	24.51	343.7	1.68	0.10	1436.

REFERENCE NO. 75-2- 26 STN- BS08 DATE 27/ 4/75 GMT 1.0
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.13	4.81	0	3.81	2356.0	0.0	0.0	1408.
1	-0.15	4.77	1	3.77	2359.9	0.24	0.00	1408.
3	-0.23	4.77	3	3.77	2360.2	0.71	0.01	1408.
5	-1.24	24.78	5	19.92	782.8	1.12	0.03	1429.
7	-1.52	29.06	7	23.38	451.2	1.23	0.03	1434.
10	-1.55	29.86	10	24.03	389.4	1.35	0.04	1435.
15	-1.59	30.29	15	24.38	356.0	1.53	0.07	1436.
20	-1.60	30.44	20	24.50	343.9	1.71	0.10	1436.

REFERENCE NO. 75-2- 27 STN- BS08 DATE 27/ 4/75 GMT 2.1
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.18	4.76	0	3.77	2360.5	0.0	0.0	1408.
1	-0.20	4.76	1	3.77	2360.6	0.24	0.00	1408.
3	-0.24	4.74	3	3.75	2362.6	0.71	0.01	1407.
5	-1.28	23.29	5	18.72	898.5	1.12	0.03	1427.
7	-1.53	28.99	7	23.33	456.3	1.24	0.03	1434.
10	-1.56	29.83	10	24.00	391.7	1.36	0.04	1435.
15	-1.59	30.29	15	24.38	355.9	1.55	0.07	1436.
20	-1.60	30.41	20	24.47	346.7	1.73	0.10	1436.

REFERENCE NO. 75-2- 28 STN- BS08 DATE 27/ 4/75 GMT 3.3
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- 300 WAVE P/H AIR TEMP . WW
WIND SPD- 09 SWELL P/H WET BLB . CLD-A 0
SWELL D BARO 1000.6

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.08	4.77	0	3.78	2358.9	0.0	0.0	1408.
1	-0.10	4.73	1	3.75	2362.7	0.24	0.00	1408.
3	-0.24	4.77	3	3.77	2360.2	0.71	0.01	1407.
5	-1.18	23.98	5	19.28	844.7	1.12	0.03	1429.
7	-1.55	29.34	7	23.61	429.3	1.22	0.03	1434.
10	-1.58	30.03	10	24.17	375.9	1.34	0.04	1435.
15	-1.59	30.22	15	24.33	361.0	1.53	0.07	1435.
20	-1.60	30.45	20	24.51	343.5	1.70	0.10	1436.

REFERENCE NO. 75-2- 29   STN- BS08   DATE 27/ 4/75   GMT 4.2
POSITION 69-56.8N, 133-25.0W   DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.19	4.79	0	3.79	2358.0	0.0	0.0	1408.
1	-0.21	4.77	1	3.77	2360.0	0.24	0.00	1408.
3	-0.24	4.77	3	3.77	2360.2	0.71	0.01	1407.
5	-1.14	24.38	5	19.60	813.9	1.12	0.03	1429.
7	-1.51	29.01	7	23.35	454.6	1.23	0.03	1434.
10	-1.57	29.76	10	23.95	396.8	1.36	0.04	1435.
15	-1.59	30.07	15	24.20	372.7	1.55	0.07	1435.
20	-1.59	30.37	20	24.44	349.8	1.73	0.10	1436.

REFERENCE NO. 75-2- 30   STN- BS08   DATE 27/ 4/75   GMT 5.2
POSITION 69-56.8N, 133-25.0W   DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.06	4.89	0	3.88	2349.4	0.0	0.0	1408.
1	-0.13	4.88	1	3.86	2350.9	0.24	0.00	1408.
3	-0.26	4.83	3	3.82	2355.2	0.71	0.01	1407.
5	-1.26	24.83	5	19.96	778.9	1.11	0.03	1429.
7	-1.57	29.54	7	23.77	413.7	1.21	0.03	1434.
10	-1.60	30.27	10	24.36	357.6	1.32	0.04	1435.
15	-1.63	30.66	15	24.68	327.2	1.49	0.06	1436.
20	-1.63	30.81	20	24.80	315.6	1.66	0.09	1436.

REFERENCE NO. 75-2- 31   STN- BS0B   DATE 27/ 4/75   GMT 6.5
POSITION 69-56.8N, 133-25.0W   DEPTH 21

WIND DIR- 300   WAVE P/H   AIR TEMP .   WW
WIND SPD- 08   SWELL P/H   WET BLB .   CLD-A 0
SWELL D   BARO 1002.9

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.09	5.02	0	3.98	2339.5	0.0	0.0	1408.
1	-0.22	5.04	1	3.99	2338.5	0.23	0.00	1408.
3	-0.28	4.93	3	3.90	2347.7	0.70	0.01	1407.
5	-1.15	15.72	5	12.61	1490.9	1.15	0.03	1417.
7	-1.60	29.21	7	23.50	439.6	1.28	0.04	1434.
10	-1.63	30.30	10	24.39	355.4	1.39	0.05	1435.
15	-1.65	30.87	15	24.85	310.9	1.56	0.07	1436.
20	-1.66	31.10	20	25.03	293.4	1.71	0.09	1436.

REFERENCE NO. 75-2- 32   STN- BS0B   DATE 27/ 4/75   GMT 7.0
POSITION 69-56.8N, 133-25.0W   DEPTH 21

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.28	4.90	0	3.87	2350.1	0.0	0.0	1407.
1	-0.27	4.90	1	3.87	2350.3	0.24	0.00	1407.
3	-0.28	4.90	3	3.87	2350.2	0.71	0.01	1407.
5	-1.19	22.10	5	17.75	991.5	1.13	0.03	1426.
7	-1.59	29.90	7	24.06	386.3	1.23	0.03	1435.
10	-1.63	30.63	10	24.65	330.0	1.33	0.04	1436.
15	-1.65	30.94	15	24.91	305.6	1.49	0.06	1436.
20	-1.66	31.17	20	25.09	288.0	1.64	0.09	1437.

REFERENCE NO, 75-2- 33 STN- BS08 DATE 27/ 4/75 GMT 15,6
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- 300 WAVE P/H AIR TEMP . WW
WIND SPD- 15 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1009,8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,18	5,06	0	4,01	2336,3	0,0	0,0	1408,
1	-0,21	5,02	1	3,97	2340,0	0,23	0,00	1408,
3	-0,28	4,96	3	3,92	2345,3	0,70	0,01	1408,
5	-1,04	21,28	5	17,10	1054,7	1,13	0,03	1426,
7	-1,59	30,04	7	24,17	375,4	1,23	0,03	1435,
10	-1,63	30,82	10	24,81	315,2	1,33	0,04	1436,
15	-1,66	31,25	15	25,16	281,5	1,48	0,06	1437,
20	-1,66	31,32	20	25,22	276,0	1,62	0,09	1437,

REFERENCE NO, 75-2- 34 STN- BS08 DATE 27/ 4/75 GMT 16,0
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,08	4,95	0	3,93	2344,4	0,0	0,0	1408,
1	-0,18	4,92	1	3,90	2347,6	0,23	0,00	1408,
3	-0,32	4,87	3	3,85	2352,2	0,70	0,01	1407,
5	-1,06	20,22	5	16,24	1137,4	1,14	0,03	1424,
7	-1,63	29,71	7	23,91	400,3	1,25	0,03	1434,
10	-1,65	30,36	10	24,44	350,3	1,36	0,04	1435,
15	-1,70	30,81	15	24,80	315,5	1,52	0,07	1436,
20	-1,70	30,96	20	24,92	304,0	1,68	0,09	1436,

REFERENCE NO. 75-2- 35 STN- BS08 DATE 27/ 4/75 GMT 17.3
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.15	4.85	0	3.84	2353.5	0.0	0.0	1408.
1	-0.16	4.85	1	3.84	2353.6	0.24	0.00	1408.
3	-0.23	4.83	3	3.82	2355.5	0.71	0.01	1408.
5	-1.08	23.27	5	18.71	899.6	1.12	0.03	1428.
7	-1.52	29.32	7	23.59	431.1	1.23	0.03	1434.
10	-1.55	29.92	10	24.08	384.6	1.35	0.04	1435.
15	-1.59	30.40	15	24.47	347.4	1.53	0.07	1436.
20	-1.59	30.47	20	24.53	341.7	1.71	0.10	1436.

REFERENCE NO. 75-2- 36 STN- BS08 DATE 27/ 4/75 GMT 18.0
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- 300 WAVE P/H AIR TEMP . WW
WIND SPD- 10 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1011.6

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.15	4.85	0	3.84	2353.5	0.0	0.0	1408.
1	-0.19	4.80	1	3.80	2357.3	0.24	0.00	1408.
3	-0.23	4.77	3	3.77	2360.3	0.71	0.01	1408.
5	-0.93	21.41	5	17.21	1044.4	1.13	0.03	1426.
7	-1.52	29.17	7	23.47	442.5	1.25	0.03	1434.
10	-1.55	29.85	10	24.03	389.6	1.37	0.05	1435.
15	-1.59	30.33	15	24.41	353.1	1.56	0.07	1436.
20	-1.59	30.40	20	24.47	347.2	1.73	0.10	1436.

REFERENCE NO. 75-2- 37 STN- BS08 DATE 27/ 4/75 GMT 19.3
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.29	4.81	0	3.83	2354.6	0.0	0.0	1410.
1	-0.07	4.84	1	3.84	2353.8	0.24	0.00	1408.
3	-0.23	4.83	3	3.82	2355.4	0.71	0.01	1408.
5	-1.08	23.73	5	19.07	864.2	1.13	0.03	1429.
7	-1.52	29.21	7	23.50	439.7	1.24	0.03	1434.
10	-1.55	29.89	10	24.06	386.6	1.36	0.04	1435.
15	-1.58	30.39	15	24.46	348.0	1.54	0.07	1436.
20	-1.59	30.48	20	24.53	341.5	1.71	0.10	1436.

REFERENCE NO. 75-2- 38 STN- BS08 DATE 27/ 4/75 GMT 20.0
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- 300	WAVE P/H	AIR TEMP .	WW
WIND SPD- 12	SWELL P/H	WET BLB .	CLD-A 8
	SWELL D	BARO 1012.8	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.13	4.90	0	3.88	2348.9	0.0	0.0	1408.
1	-0.17	4.84	1	3.83	2354.5	0.24	0.00	1408.
3	-0.23	4.83	3	3.82	2355.5	0.71	0.01	1408.
5	-0.92	21.52	5	17.29	1036.5	1.13	0.03	1426.
7	-1.51	29.26	7	23.55	435.3	1.24	0.03	1434.
10	-1.55	29.89	10	24.05	387.2	1.37	0.04	1435.
15	-1.58	30.32	15	24.40	353.7	1.55	0.07	1436.
20	-1.59	30.36	20	24.44	350.2	1.73	0.10	1436.

REFERENCE NO, 75-2- 41 STN- BS0B DATE 27/ 4/75 GMT 21,2
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,22	5,13	0	4,06	2331,1	0,0	0,0	1408,
1	-0,22	5,10	1	4,04	2333,2	0,23	0,00	1408,
3	-0,22	4,98	3	3,94	2343,3	0,70	0,01	1408,
5	-0,92	19,20	5	15,42	1217,2	1,13	0,03	1423,
7	-1,51	29,55	7	23,78	413,0	1,24	0,03	1435,
10	-1,55	30,22	10	24,32	361,7	1,36	0,04	1436,
15	-1,58	30,73	15	24,73	322,4	1,53	0,07	1436,
20	-1,59	30,77	20	24,77	319,0	1,69	0,09	1436,

REFERENCE NO, 75-2- 42 STN- BS0B DATE 27/ 4/75 GMT 22,0
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,23	4,95	0	3,92	2345,5	0,0	0,0	1408,
1	-0,23	4,95	1	3,92	2345,7	0,23	0,00	1408,
3	-0,23	4,92	3	3,89	2348,1	0,70	0,01	1408,
5	-0,81	21,74	5	17,47	1018,7	1,12	0,03	1427,
7	-1,30	29,35	7	23,62	428,5	1,23	0,03	1435,
10	-1,45	29,93	10	24,09	383,8	1,35	0,04	1436,
15	-1,54	30,46	15	24,52	342,5	1,54	0,07	1436,
20	-1,57	30,57	20	24,60	334,4	1,70	0,10	1436,

REFERENCE NO. 75-2- 43 STN- BSOB DATE 27/ 4/75 GMT 23.3
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.22	5.01	0	3.96	2340.8	0.0	0.0	1408.
1	-0.22	5.01	1	3.96	2341.0	0.23	0.00	1408.
3	-0.24	4.95	3	3.92	2345.6	0.70	0.01	1408.
5	-0.96	20.16	5	16.19	1142.6	1.13	0.03	1424.
7	-1.52	28.98	7	23.32	456.8	1.26	0.04	1434.
10	-1.56	30.12	10	24.24	369.0	1.38	0.05	1435.
15	-1.60	30.78	15	24.77	318.3	1.55	0.07	1436.
20	-1.61	30.90	20	24.87	309.1	1.71	0.10	1436.

REFERENCE NO. 75-2- 44 STN- BSOB DATE 28/ 4/75 GMT 0.1
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.35	4.88	0	3.89	2348.0	0.0	0.0	1410.
1	-0.02	4.87	1	3.87	2350.8	0.23	0.00	1409.
3	-0.22	4.83	3	3.82	2355.5	0.71	0.01	1408.
5	-0.99	21.35	5	17.15	1049.3	1.13	0.03	1426.
7	-1.51	29.26	7	23.55	435.4	1.25	0.03	1434.
10	-1.54	29.88	10	24.04	387.9	1.37	0.05	1435.
15	-1.57	30.42	15	24.49	345.6	1.55	0.07	1436.
20	-1.58	30.50	20	24.55	339.5	1.72	0.10	1436.

REFERENCE NO, 75-2- 45 STN- BS0B DATE 28/ 4/75 GMT 1,2
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,18	4,76	0	3,77	2360,5	0,0	0,0	1408,
1	-0,20	4,74	1	3,75	2362,5	0,24	0,00	1408,
3	-0,23	4,77	3	3,77	2360,2	0,71	0,01	1408,
5	-1,15	23,93	5	19,23	849,0	1,12	0,03	1429,
7	-1,52	29,13	7	23,44	445,6	1,22	0,03	1434,
10	-1,55	29,82	10	24,00	392,2	1,35	0,04	1435,
15	-1,59	30,29	15	24,38	355,9	1,53	0,07	1436,
20	-1,59	30,40	20	24,47	347,2	1,71	0,10	1436,

REFERENCE NO, 75-2- 46 STN- BS0B DATE 28/ 4/75 GMT 2,1
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- 300 WAVE P/H AIR TEMP . WW
WIND SPD- 05 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1015,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,27	4,62	0	3,65	2372,0	0,0	0,0	1407,
1	-0,27	4,62	1	3,65	2372,1	0,24	0,00	1407,
3	-0,26	4,50	3	3,55	2381,8	0,71	0,01	1407,
5	-0,80	8,54	5	6,80	2060,1	1,18	0,03	1410,
7	-1,38	25,75	7	20,70	707,5	1,41	0,04	1430,
10	-1,50	27,95	10	22,48	536,8	1,59	0,06	1433,
15	-1,58	29,29	15	23,57	432,7	1,84	0,09	1434,
20	-1,60	29,64	20	23,85	405,9	2,04	0,13	1435,

REFERENCE NO. 75-2- 47 STN- BS08 DATE 28/ 4/75 GMT 3.2
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR- 275	WAVE P/H	AIR TEMP .	WW
WIND SPD- 4	SWELL P/H	WET BLB .	CLD-A 7
	SWELL D	BARO 1016.4	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.13	4.81	0	3.81	2356.0	0.0	0.0	1408.
1	-0.14	4.79	1	3.79	2358.1	0.24	0.00	1408.
3	-0.22	4.74	3	3.74	2362.7	0.71	0.01	1408.
5	-0.98	22.99	5	18.47	921.9	1.13	0.03	1428.
7	-1.48	28.95	7	23.29	459.8	1.24	0.03	1434.
10	-1.54	29.73	10	23.93	399.0	1.36	0.05	1435.
15	-1.57	30.13	15	24.25	368.2	1.56	0.07	1435.
20	-1.58	30.24	20	24.34	359.4	1.74	0.10	1436.

REFERENCE NO. 75-2- 48 STN- BS08 DATE 28/ 4/75 GMT 4.1
POSITION 69-56.8N, 133-25.0W DEPTH 21

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.13	4.78	0	3.79	2358.5	0.0	0.0	1408.
1	-0.18	4.79	1	3.79	2358.3	0.24	0.00	1408.
3	-0.23	4.83	3	3.82	2355.4	0.71	0.01	1408.
5	-1.13	24.55	5	19.73	800.8	1.11	0.03	1430.
7	-1.50	29.00	7	23.34	455.4	1.22	0.03	1434.
10	-1.55	29.78	10	23.96	395.7	1.34	0.04	1435.
15	-1.58	30.17	15	24.28	365.0	1.53	0.07	1435.
20	-1.59	30.28	20	24.37	356.3	1.71	0.10	1436.

REFERENCE NO, 75-2- 49 STN- BS08 DATE 28/ 4/75 GMT 5,5
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0,16	4,88	0	3,86	2351,0	0,0	0,0	1408,
1	-0,24	4,89	1	3,87	2350,5	0,24	0,00	1408,
3	-0,28	4,84	3	3,82	2355,0	0,71	0,01	1407,
5	-1,09	23,04	5	18,51	918,1	1,13	0,03	1428,
7	-1,56	29,72	7	23,92	400,0	1,23	0,03	1435,
10	-1,61	30,42	10	24,49	345,7	1,34	0,04	1436,
15	-1,65	30,91	15	24,88	307,9	1,51	0,06	1436,
20	-1,67	31,07	20	25,01	295,7	1,66	0,09	1436,

REFERENCE NO, 75-2- 50 STN- BS08 DATE 28/ 4/75 GMT 14,5
POSITION 69-56,8N, 133-25,0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- 0 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1020,9

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0,26	4,93	0	3,92	2344,8	0,0	0,0	1410,
1	0,00	4,90	1	3,89	2348,5	0,23	0,00	1409,
3	-0,26	4,83	3	3,82	2355,2	0,71	0,01	1407,
5	-1,01	21,64	5	17,39	1026,6	1,14	0,03	1426,
7	-1,54	29,73	7	23,93	399,1	1,24	0,03	1435,
10	-1,58	30,40	10	24,46	347,8	1,35	0,04	1436,
15	-1,64	30,89	15	24,87	309,4	1,51	0,06	1436,
20	-1,64	30,97	20	24,93	303,6	1,67	0,09	1436,

REFERENCE NO. 75-2- 51   STN- BSOC   DATE 1/ 5/75   GMT 5.5
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP -10.1   WW
WIND SPD- 0   SWELL P/H   WET BLB .   CLD-A 0
SWELL D   BARO 1025.8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.39	27.17	0	21.85	597.4	0.0	0.0	1432.
1	-1.45	27.19	1	21.87	595.5	0.06	0.00	1432.
3	-1.49	27.18	3	21.86	596.3	0.18	0.00	1431.
5	-1.49	27.22	5	21.90	593.3	0.30	0.01	1432.
7	-1.58	29.01	7	23.34	455.0	0.41	0.01	1434.
10	-1.61	29.88	10	24.05	387.7	0.53	0.02	1435.
15	-1.63	30.07	15	24.20	372.7	0.72	0.05	1435.
20	-1.64	30.46	20	24.51	342.9	0.90	0.08	1436.
30	-1.53	31.29	30	25.19	279.0	1.21	0.16	1437.
50	-1.42	32.19	50	25.92	209.4	1.69	0.35	1440.

REFERENCE NO. 75-2- 52   STN- BSOC   DATE 1/ 5/75   GMT 6.2
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP -13.5   WW
WIND SPD- 0   SWELL P/H   WET BLB .   CLD-A 0
SWELL D   BARO 1025.6

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.49	26.79	0	21.54	626.9	0.0	0.0	1431.
1	-1.49	26.83	1	21.58	623.4	0.06	0.00	1431.
3	-1.48	26.99	3	21.71	610.9	0.19	0.00	1431.
5	-1.49	27.39	5	22.04	579.8	0.31	0.01	1432.
7	-1.57	29.22	7	23.51	438.7	0.41	0.01	1434.
10	-1.60	29.76	10	23.95	397.1	0.53	0.02	1435.
15	-1.62	29.99	15	24.14	378.9	0.73	0.05	1435.
20	-1.63	30.33	20	24.41	353.0	0.91	0.08	1436.
30	-1.54	31.22	30	25.13	284.1	1.23	0.16	1437.
50	-1.40	32.06	50	25.81	219.6	1.72	0.36	1439.

REFERENCE NO, 75-2- 53 STN- BSOC DATE 1/ 5/75 GMT 7,3
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,44	26,85	0	21,59	622,0	0,0	0,0	1431,
1	-1,44	26,83	1	21,58	623,9	0,06	0,00	1431,
3	-1,44	26,78	3	21,54	627,5	0,19	0,00	1431,
5	-1,45	26,97	5	21,69	613,0	0,31	0,01	1431,
7	-1,55	28,90	7	23,25	463,4	0,42	0,01	1434,
10	-1,56	29,50	10	23,74	417,0	0,55	0,03	1434,
15	-1,58	29,70	15	23,90	401,5	0,75	0,05	1435,
20	-1,60	30,01	20	24,15	377,4	0,95	0,09	1435,
30	-1,48	30,90	30	24,87	308,6	1,29	0,17	1437,
50	-1,39	31,75	50	25,56	243,4	1,83	0,39	1439,
75	-1,37	32,05	74	25,80	220,4	2,40	0,75	1440,

REFERENCE NO, 75-2- 54 STN- BSOC DATE 1/ 5/75 GMT 8,1
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP -14,0 WW
WIND SPD- 0 SWELL P/H WET BLB . CLD-A 0
SWELL D BARO 1024,9

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,48	26,81	0	21,56	624,9	0,0	0,0	1431,
1	-1,48	26,81	1	21,56	625,1	0,06	0,00	1431,
3	-1,48	26,81	3	21,56	625,2	0,19	0,00	1431,
5	-1,47	26,88	5	21,62	620,1	0,31	0,01	1431,
7	-1,52	28,66	7	23,06	481,7	0,42	0,01	1433,
10	-1,56	29,54	10	23,77	414,2	0,56	0,03	1435,
15	-1,59	29,74	15	23,93	398,5	0,76	0,05	1435,
20	-1,60	30,05	20	24,18	374,4	0,95	0,09	1435,
30	-1,54	30,97	30	24,93	303,7	1,29	0,17	1437,
50	-1,45	31,86	50	25,65	235,1	1,82	0,38	1439,
75	-1,41	32,16	74	25,89	211,8	2,37	0,73	1440,

REFERENCE NO, 75-2- 55 STN- BSOC DATE 1/ 5/75 GMT 9,3
POSITION 69-35,0N, 133-58,0W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,52	26,99	0	21,71	611,0	0,0	0,0	1431,
1	-1,52	26,99	1	21,71	611,2	0,06	0,00	1431,
3	-1,52	26,99	3	21,71	611,2	0,18	0,00	1431,
5	-1,53	27,14	5	21,83	599,3	0,31	0,01	1431,
7	-1,62	29,08	7	23,40	449,4	0,41	0,01	1434,
10	-1,64	29,72	10	23,92	399,8	0,53	0,02	1434,
15	-1,66	29,92	15	24,08	384,2	0,73	0,05	1435,
20	-1,68	30,23	20	24,33	360,2	0,92	0,08	1435,
30	-1,56	31,13	30	25,06	290,9	1,24	0,17	1437,
50	-1,52	31,93	50	25,70	229,6	1,75	0,37	1439,
75	-1,44	32,23	74	25,95	206,0	2,29	0,71	1440,

REFERENCE NO, 75-2- 56 STN- BSOC DATE 1/ 5/75 GMT 10,1
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,44	26,96	0	21,68	613,6	0,0	0,0	1431,
1	-1,44	26,96	1	21,68	613,7	0,06	0,00	1431,
3	-1,45	26,96	3	21,69	613,2	0,18	0,00	1431,
5	-1,45	26,97	5	21,69	612,8	0,31	0,01	1431,
7	-1,53	28,56	7	22,98	489,4	0,42	0,01	1433,
10	-1,57	29,62	10	23,83	407,9	0,55	0,03	1435,
15	-1,59	29,85	15	24,02	389,8	0,75	0,05	1435,
20	-1,61	30,16	20	24,28	365,5	0,94	0,08	1435,
30	-1,49	31,06	30	25,00	296,2	1,27	0,17	1437,
50	-1,40	31,91	50	25,69	231,3	1,79	0,38	1439,
75	-1,38	32,24	74	25,95	205,9	2,33	0,72	1440,

REFERENCE NO. 75-2- 57 STN- BSOC DATE 1/ 5/75 GMT 11.2
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP -15.2 WW
WIND SPD- 0 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1023.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.44	26.81	0	21.56	625.0	0.0	0.0	1431.
1	-1.44	26.81	1	21.56	625.2	0.06	0.00	1431.
3	-1.44	26.81	3	21.56	625.0	0.19	0.00	1431.
5	-1.45	26.93	5	21.66	616.2	0.31	0.01	1431.
7	-1.52	28.55	7	22.97	490.2	0.42	0.01	1433.
10	-1.56	29.53	10	23.76	414.6	0.55	0.03	1435.
15	-1.57	29.73	15	23.92	399.2	0.76	0.05	1435.
20	-1.59	30.04	20	24.18	375.3	0.95	0.09	1435.
30	-1.48	30.94	30	24.90	306.0	1.29	0.17	1437.
50	-1.36	31.80	50	25.60	239.9	1.83	0.39	1439.
75	-1.37	32.12	74	25.85	215.2	2.39	0.75	1440.

REFERENCE NO. 75-2- 58 STN- BSOC DATE 1/ 5/75 GMT 12.0
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.30	26.62	0	21.41	639.8	0.0	0.0	1432.
1	-1.39	26.69	1	21.47	634.4	0.06	0.00	1431.
3	-1.44	26.70	3	21.48	633.4	0.19	0.00	1431.
5	-1.44	26.85	5	21.59	622.2	0.32	0.01	1431.
7	-1.52	28.62	7	23.03	484.9	0.43	0.01	1433.
10	-1.55	29.45	10	23.70	420.4	0.56	0.03	1434.
15	-1.57	29.62	15	23.84	407.7	0.77	0.05	1435.
20	-1.59	29.96	20	24.11	381.1	0.97	0.09	1435.
30	-1.49	30.88	30	24.85	310.6	1.31	0.18	1437.
50	-1.38	31.70	50	25.52	247.3	1.86	0.40	1439.
75	-1.37	32.04	74	25.79	220.8	2.44	0.76	1440.

REFERENCE NO. 75-2- 59 STN- BSOC DATE 1/ 5/75 GMT 13.2
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	26.80	0	21.55	626.0	0.0	0.0	1431.
1	-1.43	26.80	1	21.55	626.1	0.06	0.00	1431.
3	-1.43	26.77	3	21.53	628.4	0.19	0.00	1431.
5	-1.45	27.18	5	21.86	596.5	0.31	0.01	1432.
7	-1.52	28.84	7	23.21	467.7	0.42	0.01	1434.
10	-1.55	29.45	10	23.70	420.9	0.55	0.03	1434.
15	-1.57	29.69	15	23.89	402.5	0.76	0.05	1435.
20	-1.59	29.99	20	24.14	378.6	0.95	0.09	1435.
30	-1.46	30.89	30	24.86	309.8	1.30	0.17	1437.
50	-1.38	31.74	50	25.55	244.5	1.84	0.39	1439.
75	-1.36	32.07	74	25.82	218.6	2.42	0.76	1440.

REFERENCE NO. 75-2- 60 STN- BSOC DATE 1/ 5/75 GMT 14.0
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP -10.6 WW
WIND SPD- 0 SWELL P/H WET BLB . CLD-A 2
SWELL D BARO 1022.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.44	26.70	0	21.48	633.2	0.0	0.0	1431.
1	-1.44	26.70	1	21.48	633.4	0.06	0.00	1431.
3	-1.44	26.70	3	21.47	633.6	0.19	0.00	1431.
5	-1.44	26.85	5	21.59	622.3	0.32	0.01	1431.
7	-1.52	28.66	7	23.06	482.0	0.42	0.01	1433.
10	-1.55	29.45	10	23.70	420.6	0.56	0.03	1434.
15	-1.57	29.65	15	23.86	405.5	0.77	0.05	1435.
20	-1.59	29.92	20	24.08	384.1	0.96	0.09	1435.
30	-1.48	30.83	30	24.82	314.2	1.31	0.18	1437.
50	-1.38	31.67	50	25.49	249.6	1.87	0.40	1439.
75	-1.36	32.00	74	25.76	224.1	2.45	0.77	1440.

REFERENCE NO. 75-2- 61   STN- BSOC   DATE 1/ 5/75   GMT 15.4
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.46	27.01	0	21.72	609.4	0.0	0.0	1431.
1	-1.46	26.99	1	21.71	611.5	0.06	0.00	1431.
3	-1.46	26.98	3	21.70	612.3	0.18	0.00	1431.
5	-1.47	27.13	5	21.82	600.5	0.31	0.01	1432.
7	-1.55	28.91	7	23.26	462.6	0.41	0.01	1434.
10	-1.58	29.70	10	23.90	401.6	0.54	0.03	1435.
15	-1.59	29.89	15	24.06	386.4	0.73	0.05	1435.
20	-1.62	30.17	20	24.29	364.7	0.92	0.08	1435.
30	-1.50	31.04	30	24.98	298.2	1.26	0.17	1437.
50	-1.42	31.93	50	25.70	229.8	1.78	0.38	1439.
75	-1.40	32.22	74	25.94	206.8	2.31	0.72	1440.

REFERENCE NO. 75-2- 62   STN- BSOC   DATE 1/ 5/75   GMT 16.1
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.47	26.80	0	21.56	625.5	0.0	0.0	1431.
1	-1.47	26.80	1	21.56	625.7	0.06	0.00	1431.
3	-1.47	26.84	3	21.58	623.1	0.19	0.00	1431.
5	-1.47	26.98	5	21.70	612.0	0.31	0.01	1431.
7	-1.53	28.63	7	23.04	484.2	0.42	0.01	1433.
10	-1.57	29.51	10	23.74	416.4	0.55	0.03	1434.
15	-1.59	29.78	15	23.97	395.0	0.76	0.05	1435.
20	-1.61	30.05	20	24.19	374.1	0.95	0.09	1435.
30	-1.51	30.94	30	24.90	306.1	1.29	0.17	1437.
50	-1.40	31.83	50	25.63	237.0	1.82	0.39	1439.
75	-1.38	32.13	74	25.87	213.7	2.38	0.74	1440.

REFERENCE NO. 75-2- 63   STN- BSOC   DATE 1/ 5/75   GMT 17.3
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.43	26.83	0	21.58	623.1	0.0	0.0	1431.
1	-1.43	26.84	1	21.59	623.0	0.06	0.00	1431.
3	-1.43	26.77	3	21.53	628.2	0.19	0.00	1431.
5	-1.45	27.18	5	21.86	596.3	0.31	0.01	1432.
7	-1.52	28.66	7	23.06	482.0	0.42	0.01	1433.
10	-1.55	29.42	10	23.67	423.2	0.55	0.03	1434.
15	-1.58	29.70	15	23.90	401.7	0.76	0.05	1435.
20	-1.59	29.96	20	24.11	381.1	0.96	0.09	1435.
30	-1.47	30.83	30	24.81	314.7	1.31	0.18	1437.
50	-1.42	31.71	50	25.53	246.5	1.86	0.40	1439.
75	-1.38	32.01	74	25.77	223.0	2.44	0.77	1440.

REFERENCE NO. 75-2- 64   STN- BSOC   DATE 1/ 5/75   GMT 18.1
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR- 270   WAVE P/H   AIR TEMP -10.9   WW
WIND SPD- 02   SWELL P/H   WET BLB .   CLD-A 1
SWELL D   BARO 1022.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	27.12	0	21.81	601.3	0.0	0.0	1432.
1	-1.43	27.08	1	21.78	604.4	0.06	0.00	1432.
3	-1.45	27.00	3	21.72	610.4	0.18	0.00	1431.
5	-1.46	27.19	5	21.87	595.8	0.30	0.01	1432.
7	-1.54	28.78	7	23.16	472.4	0.41	0.01	1434.
10	-1.57	29.62	10	23.84	407.7	0.54	0.03	1435.
15	-1.60	29.90	15	24.06	385.9	0.74	0.05	1435.
20	-1.61	30.09	20	24.22	371.4	0.93	0.08	1435.
30	-1.49	30.99	30	24.94	302.3	1.26	0.17	1437.
50	-1.41	31.89	50	25.67	233.1	1.79	0.38	1439.
75	-1.39	32.21	74	25.93	208.1	2.34	0.73	1440.

REFERENCE NO. 75-2- 65   STN- BSOC   DATE 1/ 5/75   GMT 19.2
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
                   SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.44	27.28	0	21.94	588.5	0.0	0.0	1432.
1	-1.45	27.22	1	21.89	593.5	0.06	0.00	1432.
3	-1.47	27.16	3	21.84	598.2	0.18	0.00	1432.
5	-1.48	27.50	5	22.12	571.9	0.30	0.01	1432.
7	-1.55	28.97	7	23.31	457.6	0.40	0.01	1434.
10	-1.59	29.74	10	23.94	398.1	0.53	0.02	1435.
15	-1.61	30.10	15	24.22	370.9	0.72	0.05	1435.
20	-1.62	30.29	20	24.38	356.1	0.90	0.08	1435.
30	-1.51	31.19	30	25.10	286.7	1.22	0.16	1437.
50	-1.45	32.04	50	25.79	221.2	1.72	0.36	1439.
75	-1.40	32.37	74	26.06	195.3	2.23	0.69	1440.

REFERENCE NO. 75-2- 66   STN- BSOC   DATE 1/ 5/75   GMT 20.2
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
                   SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.46	27.12	0	21.81	601.1	0.0	0.0	1431.
1	-1.46	27.12	1	21.81	601.0	0.06	0.00	1431.
3	-1.47	27.10	3	21.79	603.0	0.18	0.00	1431.
5	-1.48	27.32	5	21.98	585.6	0.30	0.01	1432.
7	-1.55	28.80	7	23.17	471.2	0.41	0.01	1434.
10	-1.59	29.68	10	23.88	403.2	0.54	0.03	1435.
15	-1.62	30.03	15	24.17	375.9	0.73	0.05	1435.
20	-1.62	30.29	20	24.38	356.1	0.91	0.08	1435.
30	-1.51	31.16	30	25.08	288.7	1.24	0.16	1437.
50	-1.47	32.06	50	25.81	219.5	1.74	0.37	1439.
75	-1.41	32.35	74	26.04	197.0	2.26	0.69	1440.

REFERENCE NO. 75-2- 67 STN- BSOC DATE 1/ 5/75 GMT 21.3
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	27.12	0	21.81	601.1	0.0	0.0	1432.
1	-1.43	27.08	1	21.78	604.6	0.06	0.00	1432.
3	-1.44	27.03	3	21.74	608.3	0.18	0.00	1432.
5	-1.45	27.18	5	21.86	596.5	0.30	0.01	1432.
7	-1.52	28.65	7	23.05	482.3	0.41	0.01	1433.
10	-1.56	29.54	10	23.77	414.0	0.54	0.03	1435.
15	-1.59	29.88	15	24.05	387.1	0.74	0.05	1435.
20	-1.59	30.07	20	24.20	373.0	0.93	0.08	1435.
30	-1.48	31.01	30	24.96	300.1	1.27	0.17	1437.
50	-1.41	31.88	50	25.66	233.3	1.81	0.39	1439.

REFERENCE NO. 75-2- 68 STN- BSOC DATE 1/ 5/75 GMT 22.4
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- 335 WAVE P/H AIR TEMP -8.9 WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A 2
SWELL D BARO 1021.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.39	26.91	0	21.65	617.0	0.0	0.0	1432.
1	-1.39	26.89	1	21.63	619.1	0.06	0.00	1432.
3	-1.43	26.66	3	21.44	636.9	0.19	0.00	1431.
5	-1.44	26.59	5	21.39	642.0	0.32	0.01	1431.
7	-1.49	27.90	7	22.44	540.7	0.43	0.02	1433.
10	-1.55	29.20	10	23.49	440.3	0.58	0.03	1434.
15	-1.58	29.62	15	23.84	407.5	0.79	0.05	1435.
20	-1.58	29.85	20	24.02	390.2	0.99	0.09	1435.
30	-1.47	30.75	30	24.75	320.3	1.34	0.18	1437.
50	-1.43	31.68	50	25.50	248.5	1.91	0.41	1439.

REFERENCE NO. 75-2- 69 STN- BSOC DATE 1/ 5/75 GMT 23.2
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.44	26.88	0	21.62	619.4	0.0	0.0	1431.
1	-1.44	26.86	1	21.60	621.5	0.06	0.00	1431.
3	-1.44	26.78	3	21.53	627.9	0.19	0.00	1431.
5	-1.45	27.04	5	21.75	607.4	0.31	0.01	1431.
7	-1.52	28.44	7	22.88	499.2	0.42	0.01	1433.
10	-1.56	29.28	10	23.56	434.1	0.56	0.03	1434.
15	-1.58	29.63	15	23.84	407.1	0.77	0.05	1435.
20	-1.59	29.88	20	24.05	387.3	0.97	0.09	1435.
30	-1.47	30.75	30	24.75	320.3	1.32	0.18	1437.
50	-1.38	31.74	50	25.55	244.0	1.89	0.40	1439.
75	-1.37	31.94	74	25.71	228.9	2.47	0.78	1440.

REFERENCE NO. 75-2- 70 STN- BSOC DATE 2/ 5/75 GMT 0.0
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- 335 WAVE P/H AIR TEMP -8.5 WW
WIND SPD- 19 SWELL P/H WET BLB . CLD-A 6
SWELL D BARO 1021.5

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.28	27.02	0	21.73	608.5	0.0	0.0	1432.
1	-1.36	27.03	1	21.74	608.3	0.06	0.00	1432.
3	-1.43	26.99	3	21.71	611.5	0.18	0.00	1431.
5	-1.44	27.07	5	21.77	605.3	0.31	0.01	1432.
7	-1.51	28.43	7	22.87	499.9	0.42	0.01	1433.
10	-1.55	29.34	10	23.61	429.0	0.55	0.03	1434.
15	-1.58	29.73	15	23.93	398.9	0.76	0.05	1435.
20	-1.58	30.02	20	24.16	376.4	0.95	0.09	1435.
30	-1.47	30.90	30	24.87	309.2	1.30	0.17	1437.
50	-1.40	31.88	50	25.66	233.7	1.84	0.39	1439.
75	-1.37	32.05	74	25.80	220.6	2.41	0.75	1440.

REFERENCE NO. 75-2- 71 STN- BSOC DATE 2/ 5/75 GMT 1.3
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	26.86	0	21.61	620.8	0.0	0.0	1431.
1	-1.42	26.87	1	21.61	620.7	0.06	0.00	1431.
3	-1.43	26.81	3	21.56	625.4	0.19	0.00	1431.
5	-1.44	26.89	5	21.62	619.1	0.31	0.01	1431.
7	-1.51	28.10	7	22.60	525.4	0.43	0.01	1433.
10	-1.55	29.09	10	23.41	448.8	0.57	0.03	1434.
15	-1.59	29.59	15	23.81	409.8	0.78	0.05	1435.
20	-1.59	29.99	20	24.14	378.9	0.98	0.09	1435.
30	-1.47	30.79	30	24.78	317.7	1.33	0.18	1437.
50	-1.41	31.77	50	25.57	241.9	1.89	0.40	1439.
75	-1.38	31.90	75	25.68	231.5	2.47	0.77	1440.

REFERENCE NO. 75-2- 72 STN- BSOC DATE 2/ 5/75 GMT 2.1
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.40	26.78	0	21.54	627.4	0.0	0.0	1431.
1	-1.41	26.76	1	21.52	628.8	0.06	0.00	1431.
3	-1.43	26.70	3	21.47	634.0	0.19	0.00	1431.
5	-1.44	26.81	5	21.56	625.3	0.32	0.01	1431.
7	-1.49	28.16	7	22.66	520.5	0.43	0.01	1433.
10	-1.55	29.16	10	23.46	443.1	0.57	0.03	1434.
15	-1.57	29.62	15	23.84	407.7	0.78	0.05	1435.
20	-1.58	29.87	20	24.04	387.9	0.98	0.09	1435.
30	-1.47	30.75	30	24.75	320.7	1.34	0.18	1437.
50	-1.38	31.75	50	25.55	243.8	1.90	0.41	1439.
75	-1.36	31.97	75	25.73	226.7	2.48	0.78	1440.

REFERENCE NO. 75-2- 73   STN- BSOC   DATE 2/ 5/75   GMT 3.3
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR- 315   WAVE P/H   AIR TEMP -9.7   WW
WIND SPD- 14   SWELL P/H   WET BLB .   CLD-A 8
SWELL D   BARO 1021.3

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.45	26.86	0	21.60	621.5	0.0	0.0	1431.
1	-1.45	26.86	1	21.60	621.7	0.06	0.00	1431.
3	-1.45	26.86	3	21.60	621.6	0.19	0.00	1431.
5	-1.47	27.09	5	21.79	603.8	0.31	0.01	1432.
7	-1.53	28.56	7	22.98	489.4	0.42	0.01	1433.
10	-1.57	29.36	10	23.63	427.7	0.55	0.03	1434.
15	-1.59	29.71	15	23.91	400.7	0.76	0.05	1435.
20	-1.60	29.97	20	24.12	380.5	0.96	0.09	1435.
30	-1.48	30.87	30	24.85	310.9	1.30	0.17	1437.
50	-1.40	31.83	50	25.63	237.0	1.85	0.39	1439.
75	-1.39	32.07	74	25.81	218.9	2.41	0.75	1440.

REFERENCE NO. 75-2- 74   STN- BSOC   DATE 2/ 5/75   GMT 4.1
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.43	26.91	0	21.65	617.0	0.0	0.0	1431.
1	-1.44	26.89	1	21.63	618.7	0.06	0.00	1431.
3	-1.44	26.85	3	21.60	621.9	0.19	0.00	1431.
5	-1.46	27.08	5	21.78	604.0	0.31	0.01	1432.
7	-1.52	28.52	7	22.94	493.0	0.42	0.01	1433.
10	-1.56	29.28	10	23.56	433.8	0.56	0.03	1434.
15	-1.59	29.71	15	23.91	400.9	0.76	0.05	1435.
20	-1.59	29.93	20	24.09	383.7	0.96	0.09	1435.
30	-1.48	30.80	30	24.79	316.8	1.31	0.18	1437.
50	-1.42	31.79	50	25.59	240.7	1.86	0.40	1439.
75	-1.39	31.99	74	25.75	225.0	2.44	0.76	1440.

REFERENCE NO, 75-2- 75 STN- BSOC DATE 2/ 5/75 GMT 5,3
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- 315 WAVE P/H AIR TEMP -11,4 WW
WIND SPD- 14 SWELL P/H WET BLB . CLD-A 2
SWELL D BARO 1022,1

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,38	27,04	0	21,75	606,9	0,0	0,0	1432,
1	-1,42	27,03	1	21,74	607,9	0,06	0,00	1432,
3	-1,45	26,97	3	21,69	612,9	0,18	0,00	1431,
5	-1,46	27,01	5	21,72	609,9	0,31	0,01	1431,
7	-1,53	28,45	7	22,89	498,0	0,42	0,01	1433,
10	-1,57	29,29	10	23,57	433,0	0,56	0,03	1434,
15	-1,60	29,75	15	23,94	397,5	0,76	0,05	1435,
20	-1,61	29,98	20	24,13	379,9	0,96	0,09	1435,
30	-1,50	30,89	30	24,86	309,9	1,30	0,17	1437,
50	-1,43	31,84	50	25,63	236,8	1,85	0,39	1439,
75	-1,40	32,08	74	25,82	218,1	2,41	0,75	1440,

REFERENCE NO, 75-2- 76 STN- BSOC DATE 2/ 5/75 GMT 7,8
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,45	27,62	0	22,22	562,5	0,0	0,0	1432,
1	-1,47	27,58	1	22,19	565,3	0,06	0,00	1432,
3	-1,51	27,53	3	22,15	569,4	0,17	0,00	1432,
5	-1,52	27,60	5	22,20	563,6	0,28	0,01	1432,
7	-1,57	28,78	7	23,16	472,7	0,39	0,01	1433,
10	-1,63	29,94	10	24,09	383,3	0,51	0,02	1435,
15	-1,65	30,43	15	24,49	345,1	0,69	0,05	1435,
20	-1,66	30,70	20	24,71	324,3	0,86	0,08	1436,
30	-1,55	31,57	30	25,41	257,3	1,15	0,15	1438,
50	-1,49	32,49	50	26,16	186,6	1,59	0,33	1440,
75	-1,47	32,77	74	26,39	164,5	2,02	0,60	1441,

REFERENCE NO, 75-2- 77 STN- BSOC DATE 2/ 5/75 GMT 9,3
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- 335 WAVE P/H AIR TEMP -11,8 WW
WIND SPD- 11 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1022,1

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,48	27,39	0	22,03	580,1	0,0	0,0	1432,
1	-1,48	27,39	1	22,03	580,0	0,06	0,00	1432,
3	-1,49	27,40	3	22,04	579,6	0,17	0,00	1432,
5	-1,49	27,47	5	22,10	574,0	0,29	0,01	1432,
7	-1,54	28,53	7	22,96	491,6	0,40	0,01	1433,
10	-1,60	29,69	10	23,89	402,6	0,53	0,03	1435,
15	-1,63	30,29	15	24,38	355,7	0,72	0,05	1435,
20	-1,64	30,52	20	24,57	337,6	0,89	0,08	1436,
30	-1,53	31,39	30	25,27	270,8	1,19	0,16	1438,
50	-1,45	32,33	50	26,03	198,7	1,65	0,34	1440,
75	-1,44	32,71	74	26,33	169,6	2,10	0,63	1441,

REFERENCE NO, 75-2- 78 STN- BSOC DATE 2/ 5/75 GMT 10,1
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,38	27,44	0	22,07	576,1	0,0	0,0	1432,
1	-1,41	27,40	1	22,04	579,8	0,06	0,00	1432,
3	-1,44	27,32	3	21,98	585,7	0,17	0,00	1432,
5	-1,45	27,33	5	21,98	585,2	0,29	0,01	1432,
7	-1,51	28,58	7	22,99	488,1	0,40	0,01	1433,
10	-1,56	29,50	10	23,74	417,0	0,54	0,03	1434,
15	-1,59	30,03	15	24,17	375,9	0,73	0,05	1435,
20	-1,60	30,23	20	24,33	360,4	0,92	0,08	1435,
30	-1,49	31,13	30	25,06	290,8	1,24	0,17	1437,
50	-1,42	31,93	50	25,70	229,6	1,76	0,37	1439,
75	-1,41	32,17	74	25,90	211,1	2,30	0,72	1440,

REFERENCE NO. 75-2- 79 STN- BSOC DATE 2/ 5/75 GMT 11.4
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.44	26.96	0	21.68	613.3	0.0	0.0	1431.
1	-1.45	26.94	1	21.67	614.9	0.06	0.00	1431.
3	-1.46	26.90	3	21.63	618.3	0.18	0.00	1431.
5	-1.47	27.09	5	21.79	603.8	0.31	0.01	1432.
7	-1.53	28.30	7	22.77	509.7	0.42	0.01	1433.
10	-1.57	29.33	10	23.60	430.1	0.56	0.03	1434.
15	-1.59	29.75	15	23.94	397.9	0.76	0.05	1435.
20	-1.61	30.01	20	24.16	377.1	0.96	0.09	1435.
30	-1.48	30.91	30	24.88	308.4	1.30	0.17	1437.
50	-1.42	31.75	50	25.55	243.7	1.84	0.39	1439.
75	-1.40	32.08	74	25.82	217.8	2.41	0.75	1440.

REFERENCE NO. 75-2- 80 STN- BSOC DATE 2/ 5/75 GMT 12.0
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- 335 WAVE P/H AIR TEMP -9.5 WW
WIND SPD- 09 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1023.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.43	26.73	0	21.50	631.2	0.0	0.0	1431.
1	-1.44	26.76	1	21.52	628.8	0.06	0.00	1431.
3	-1.45	26.75	3	21.51	630.1	0.19	0.00	1431.
5	-1.45	26.89	5	21.63	618.7	0.31	0.01	1431.
7	-1.51	28.21	7	22.70	516.6	0.43	0.01	1433.
10	-1.57	29.21	10	23.51	439.2	0.57	0.03	1434.
15	-1.59	29.63	15	23.84	407.0	0.78	0.05	1435.
20	-1.60	29.90	20	24.06	385.9	0.97	0.09	1435.
30	-1.49	30.84	30	24.82	313.6	1.32	0.18	1437.
50	-1.40	31.69	50	25.51	248.2	1.88	0.40	1439.
75	-1.39	32.06	74	25.81	219.1	2.45	0.76	1440.

REFERENCE NO. 75-2- 81   STN- BSOC   DATE 2/ 5/75   GMT 13.2
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	26.65	0	21.43	637.4	0.0	0.0	1431.
1	-1.43	26.66	1	21.44	637.1	0.06	0.00	1431.
3	-1.44	26.67	3	21.45	636.4	0.19	0.00	1431.
5	-1.44	26.74	5	21.50	630.7	0.32	0.01	1431.
7	-1.50	27.98	7	22.51	534.3	0.43	0.02	1433.
10	-1.55	29.16	10	23.47	443.0	0.58	0.03	1434.
15	-1.57	29.50	15	23.74	416.6	0.79	0.05	1435.
20	-1.59	29.81	20	23.99	392.6	0.99	0.09	1435.
30	-1.47	30.71	30	24.72	323.3	1.35	0.18	1437.
50	-1.40	31.51	50	25.36	262.1	1.93	0.41	1439.
75	-1.38	31.91	75	25.69	231.0	2.53	0.80	1440.

REFERENCE NO. 75-2- 82   STN- BSOC   DATE 2/ 5/75   GMT 14.0
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.41	26.68	0	21.46	634.9	0.0	0.0	1431.
1	-1.42	26.69	1	21.46	634.7	0.06	0.00	1431.
3	-1.43	26.66	3	21.44	636.5	0.19	0.00	1431.
5	-1.43	26.73	5	21.50	631.0	0.32	0.01	1431.
7	-1.49	27.90	7	22.44	540.7	0.43	0.02	1433.
10	-1.55	29.23	10	23.52	437.5	0.58	0.03	1434.
15	-1.57	29.54	15	23.77	413.8	0.79	0.05	1435.
20	-1.59	29.81	20	23.99	392.8	0.99	0.09	1435.
30	-1.48	30.72	30	24.73	322.5	1.35	0.18	1437.
50	-1.41	31.51	50	25.37	261.7	1.93	0.42	1439.
75	-1.38	31.87	75	25.65	234.0	2.54	0.80	1440.

REFERENCE NO. 75-2- 83   STN- BSOC   DATE 2/ 5/75   GMT 15.2
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR- 000   WAVE P/H   AIR TEMP -10.0   WW
WIND SPD- 13   SWELL P/H   WET BLB .   CLD-A 9
SWELL D   BARO 1023.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	26.68	0	21.46	634.7	0.0	0.0	1431.
1	-1.42	26.69	1	21.46	634.7	0.06	0.00	1431.
3	-1.43	26.66	3	21.44	636.9	0.19	0.00	1431.
5	-1.44	26.81	5	21.56	625.3	0.32	0.01	1431.
7	-1.49	27.98	7	22.51	534.5	0.43	0.02	1433.
10	-1.55	29.12	10	23.43	446.3	0.58	0.03	1434.
15	-1.56	29.46	15	23.71	419.8	0.79	0.05	1434.
20	-1.58	29.80	20	23.98	393.5	0.99	0.09	1435.
30	-1.47	30.67	30	24.69	326.3	1.36	0.18	1437.
50	-1.39	31.46	50	25.33	265.5	1.94	0.42	1439.
75	-1.38	31.79	75	25.59	239.9	2.56	0.81	1440.

REFERENCE NO. 75-2- 84   STN- BSOC   DATE 2/ 5/75   GMT 16.1
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.43	26.63	0	21.41	639.3	0.0	0.0	1431.
1	-1.43	26.63	1	21.41	639.5	0.06	0.00	1431.
3	-1.43	26.63	3	21.41	639.4	0.19	0.00	1431.
5	-1.44	26.66	5	21.44	636.4	0.32	0.01	1431.
7	-1.49	27.87	7	22.42	542.9	0.44	0.02	1432.
10	-1.55	29.09	10	23.41	448.6	0.58	0.03	1434.
15	-1.57	29.47	15	23.71	419.4	0.80	0.06	1434.
20	-1.57	29.79	20	23.98	394.2	1.00	0.09	1435.
30	-1.48	30.68	30	24.70	325.5	1.36	0.18	1437.
50	-1.39	31.53	50	25.38	260.1	1.94	0.41	1439.
75	-1.36	31.93	75	25.70	229.7	2.53	0.79	1440.

REFERENCE NO, 75-2- 85 STN- BSOC DATE 2/ 5/75 GMT 17,3
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,38	26,97	0	21,69	612,3	0,0	0,0	1432,
1	-1,40	26,95	1	21,67	614,5	0,06	0,00	1432,
3	-1,43	26,88	3	21,62	619,8	0,18	0,00	1431,
5	-1,44	26,92	5	21,65	616,9	0,31	0,01	1431,
7	-1,49	28,12	7	22,63	523,3	0,43	0,01	1433,
10	-1,55	29,31	10	23,58	431,9	0,57	0,03	1434,
15	-1,57	29,65	15	23,86	405,5	0,77	0,05	1435,
20	-1,58	29,91	20	24,07	384,9	0,97	0,09	1435,
30	-1,47	30,83	30	24,81	314,7	1,32	0,18	1437,
50	-1,41	31,63	50	25,46	253,0	1,88	0,40	1439,
75	-1,37	32,01	75	25,77	223,3	2,47	0,77	1440,

REFERENCE NO, 75-2- 86 STN- BSOC DATE 2/ 5/75 GMT 18,1
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- 335 WAVE P/H AIR TEMP -6,9 WW
WIND SPD- 09 SWELL P/H WET BLB , CLD-A 9
SWELL D BARO 1023,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,42	27,08	0	21,78	603,7	0,0	0,0	1432,
1	-1,43	27,06	1	21,77	605,6	0,06	0,00	1432,
3	-1,44	26,95	3	21,68	614,1	0,18	0,00	1431,
5	-1,44	27,03	5	21,74	608,0	0,31	0,01	1432,
7	-1,51	28,24	7	22,72	514,1	0,42	0,01	1433,
10	-1,56	29,38	10	23,65	425,9	0,56	0,03	1434,
15	-1,57	29,72	15	23,92	399,7	0,76	0,05	1435,
20	-1,58	29,99	20	24,14	379,1	0,96	0,09	1435,
30	-1,47	30,90	30	24,87	308,9	1,30	0,17	1437,
50	-1,41	31,70	50	25,52	247,4	1,85	0,40	1439,
75	-1,37	32,05	74	25,80	220,2	2,43	0,76	1440,

REFERENCE NO, 75-2- 87   STN- BSOC   DATE 2/ 5/75   GMT 19,3
POSITION 69-36,7N, 137-58,1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,33	26,96	0	21,69	613,1	0,0	0,0	1432,
1	-1,38	26,93	1	21,66	615,5	0,06	0,00	1432,
3	-1,44	26,88	3	21,62	619,6	0,19	0,00	1431,
5	-1,44	26,88	5	21,62	619,5	0,31	0,01	1431,
7	-1,50	28,05	7	22,57	528,7	0,43	0,01	1433,
10	-1,55	29,31	10	23,58	431,7	0,57	0,03	1434,
15	-1,57	29,68	15	23,89	402,7	0,77	0,05	1435,
20	-1,57	29,98	20	24,13	379,6	0,97	0,09	1435,
30	-1,48	30,83	30	24,81	314,4	1,32	0,18	1437,
50	-1,41	31,66	50	25,49	250,2	1,88	0,40	1439,
75	-1,38	32,02	74	25,77	222,8	2,46	0,77	1440,

REFERENCE NO, 75-2- 88   STN- BSOC   DATE 2/ 5/75   GMT 20,0
POSITION 69-36,7N, 137-58,1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,42	27,15	0	21,84	598,5	0,0	0,0	1432,
1	-1,42	27,11	1	21,80	601,9	0,06	0,00	1432,
3	-1,43	26,98	3	21,70	611,7	0,18	0,00	1431,
5	-1,44	27,02	5	21,74	608,5	0,30	0,01	1432,
7	-1,49	28,31	7	22,77	509,2	0,42	0,01	1433,
10	-1,55	29,49	10	23,73	417,6	0,55	0,03	1435,
15	-1,58	29,80	15	23,99	393,4	0,75	0,05	1435,
20	-1,56	30,04	20	24,18	374,8	0,95	0,09	1435,
30	-1,48	30,90	30	24,87	308,6	1,29	0,17	1437,
50	-1,41	31,70	50	25,52	247,4	1,84	0,40	1439,
75	-1,38	32,02	74	25,78	222,4	2,42	0,76	1440,

REFERENCE NO. 75-2- 89 STN- BSOC DATE 2/ 5/75 GMT 21.3
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- 315 WAVE P/H AIR TEMP -3.2 WW
WIND SPD- 3 SWELL P/H WET BLB . CLD-A 9
SWELL D BARO 1023.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.42	27.26	0	21.93	589.8	0.0	0.0	1432.
1	-1.43	27.20	1	21.88	594.9	0.06	0.00	1432.
3	-1.44	27.07	3	21.77	605.2	0.18	0.00	1432.
5	-1.45	27.11	5	21.80	602.1	0.30	0.01	1432.
7	-1.51	28.17	7	22.66	519.7	0.41	0.01	1433.
10	-1.57	29.65	10	23.86	405.4	0.55	0.03	1435.
15	-1.59	29.89	15	24.05	386.9	0.75	0.05	1435.
20	-1.59	30.14	20	24.26	367.3	0.94	0.08	1435.
30	-1.49	30.99	30	24.94	302.1	1.27	0.17	1437.
50	-1.43	31.76	50	25.56	242.8	1.81	0.39	1439.
75	-1.39	32.18	74	25.90	210.5	2.36	0.74	1440.

REFERENCE NO. 75-2- 90 STN- BSOC DATE 2/ 5/75 GMT 22.0
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.38	27.26	0	21.93	590.2	0.0	0.0	1432.
1	-1.41	27.24	1	21.91	592.0	0.06	0.00	1432.
3	-1.44	27.10	3	21.80	602.4	0.18	0.00	1432.
5	-1.45	27.07	5	21.77	604.9	0.30	0.01	1432.
7	-1.50	28.10	7	22.60	525.5	0.41	0.01	1433.
10	-1.57	29.65	10	23.86	405.4	0.55	0.03	1435.
15	-1.59	29.85	15	24.02	389.8	0.75	0.05	1435.
20	-1.59	30.11	20	24.23	369.5	0.94	0.09	1435.
30	-1.50	30.96	30	24.92	304.1	1.28	0.17	1437.
50	-1.43	31.72	50	25.53	245.7	1.82	0.39	1439.
75	-1.39	32.13	74	25.87	213.7	2.37	0.74	1440.

REFERENCE NO. 75-2- 91 STN- BSOC DATE 2/ 5/75 GMT 23.3
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- 315 WAVE P/H AIR TEMP 02.5 WW
WIND SPD- 06 SWELL P/H WET BLB . CLD-A 8
SWELL D BARO 1022.8

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.40	27.10	0	21.80	602.4	0.0	0.0	1432.
1	-1.42	27.07	1	21.77	605.0	0.06	0.00	1432.
3	-1.44	26.99	3	21.71	611.3	0.18	0.00	1431.
5	-1.44	26.99	5	21.71	611.0	0.30	0.01	1431.
7	-1.50	28.17	7	22.66	520.1	0.42	0.01	1433.
10	-1.56	29.61	10	23.83	408.6	0.55	0.03	1435.
15	-1.58	29.81	15	23.99	393.0	0.75	0.05	1435.
20	-1.59	30.06	20	24.20	373.2	0.95	0.09	1435.
30	-1.49	30.95	30	24.91	304.9	1.29	0.17	1437.
50	-1.43	31.69	50	25.51	248.1	1.83	0.39	1439.
75	-1.38	32.13	74	25.87	213.9	2.39	0.75	1440.

REFERENCE NO. 75-2- 92 STN- BSOC DATE 3/ 5/75 GMT 0.1
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.32	27.03	0	21.74	607.9	0.0	0.0	1432.
1	-1.39	26.99	1	21.71	611.2	0.06	0.00	1432.
3	-1.43	26.87	3	21.61	620.2	0.18	0.00	1431.
5	-1.43	26.88	5	21.62	619.9	0.31	0.01	1431.
7	-1.48	27.90	7	22.44	540.9	0.43	0.02	1433.
10	-1.55	29.49	10	23.73	417.6	0.57	0.03	1435.
15	-1.57	29.73	15	23.92	399.2	0.77	0.05	1435.
20	-1.58	29.95	20	24.11	381.9	0.97	0.09	1435.
30	-1.48	30.80	30	24.79	316.8	1.32	0.18	1437.
50	-1.43	31.54	50	25.39	259.3	1.88	0.41	1439.
75	-1.37	31.97	75	25.74	226.2	2.48	0.78	1440.

REFERENCE NO. 75-2- 93 STN- BSOC DATE 3/ 5/75 GMT 1.1
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.40	27.07	0	21.77	605.1	0.0	0.0	1432.
1	-1.42	27.01	1	21.72	609.9	0.06	0.00	1432.
3	-1.44	26.92	3	21.65	616.9	0.18	0.00	1431.
5	-1.44	26.92	5	21.65	616.8	0.31	0.01	1431.
7	-1.48	27.75	7	22.32	552.3	0.42	0.01	1432.
10	-1.56	29.50	10	23.74	417.2	0.56	0.03	1434.
15	-1.58	29.73	15	23.93	399.0	0.77	0.05	1435.
20	-1.59	29.99	20	24.14	378.6	0.96	0.09	1435.
30	-1.48	30.87	30	24.84	311.4	1.31	0.18	1437.
50	-1.44	31.59	50	25.43	255.7	1.87	0.40	1439.
75	-1.38	32.01	74	25.77	223.0	2.45	0.77	1440.

REFERENCE NO. 75-2- 94 STN- BSOC DATE 3/ 5/75 GMT 2.1
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.13	27.43	0	22.06	577.6	0.0	0.0	1434.
1	-1.27	27.29	1	21.95	588.1	0.06	0.00	1433.
3	-1.43	27.02	3	21.73	609.2	0.18	0.00	1432.
5	-1.43	26.98	5	21.70	611.6	0.30	0.01	1432.
7	-1.47	27.74	7	22.32	552.8	0.42	0.01	1432.
10	-1.55	29.56	10	23.79	412.6	0.56	0.03	1435.
15	-1.57	29.76	15	23.95	396.6	0.76	0.05	1435.
20	-1.57	29.98	20	24.13	380.1	0.95	0.09	1435.
30	-1.47	30.83	30	24.81	314.7	1.30	0.18	1437.
50	-1.45	31.56	50	25.41	257.9	1.86	0.40	1439.
75	-1.37	32.01	74	25.76	223.6	2.45	0.77	1440.

REFERENCE NO, 75-2- 95 STN- BSOC DATE 3/ 5/75 GMT 3,4
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- 335 WAVE P/H AIR TEMP -5,6 WW
WIND SPD- 02 SWELL P/H WET BLB , CLD-A
SWELL D BARO 1021,4

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,38	26,97	0	21,69	612,5	0,0	0,0	1432,
1	-1,41	26,93	1	21,66	616,0	0,06	0,00	1431,
3	-1,43	26,84	3	21,59	622,6	0,19	0,00	1431,
5	-1,44	26,88	5	21,62	619,5	0,31	0,01	1431,
7	-1,49	27,90	7	22,45	540,5	0,43	0,02	1433,
10	-1,56	29,50	10	23,74	417,2	0,57	0,03	1434,
15	-1,58	29,74	15	23,93	398,7	0,77	0,05	1435,
20	-1,57	29,98	20	24,13	379,6	0,96	0,09	1435,
30	-1,47	30,79	30	24,78	317,5	1,32	0,18	1437,
50	-1,44	31,52	50	25,37	261,3	1,88	0,40	1439,
75	-1,37	31,94	75	25,71	228,9	2,48	0,78	1440,

REFERENCE NO, 75-2- 96 STN- BSOC DATE 3/ 5/75 GMT 4,2
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,43	26,98	0	21,70	611,8	0,0	0,0	1431,
1	-1,43	26,91	1	21,64	617,3	0,06	0,00	1431,
3	-1,44	26,81	3	21,56	625,0	0,19	0,00	1431,
5	-1,44	26,81	5	21,56	624,9	0,31	0,01	1431,
7	-1,49	27,65	7	22,24	559,9	0,43	0,02	1432,
10	-1,56	29,46	10	23,71	419,8	0,57	0,03	1434,
15	-1,59	29,70	15	23,90	401,1	0,78	0,05	1435,
20	-1,59	29,96	20	24,11	381,1	0,97	0,09	1435,
30	-1,48	30,79	30	24,79	317,0	1,33	0,18	1437,
50	-1,44	31,55	50	25,40	258,7	1,89	0,41	1439,
75	-1,37	31,97	75	25,74	226,1	2,48	0,78	1440,

REFERENCE NO, 75-2- 97 STN- BSOC DATE 3/ 5/75 GMT 5,4
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP -8,9 WW
WIND SPD- 0 SWELL P/H WET BLB , CLD-A
SWELL D BARO 1021,2

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,39	27,30	0	21,96	586,7	0,0	0,0	1432,
1	-1,42	27,09	1	21,79	603,5	0,06	0,00	1432,
3	-1,44	26,88	3	21,62	619,6	0,18	0,00	1431,
5	-1,44	26,92	5	21,65	616,6	0,31	0,01	1431,
7	-1,49	27,72	7	22,30	554,3	0,43	0,02	1432,
10	-1,56	29,54	10	23,77	414,2	0,56	0,03	1435,
15	-1,59	29,77	15	23,96	395,7	0,77	0,05	1435,
20	-1,59	30,00	20	24,14	378,3	0,96	0,09	1435,
30	-1,47	30,86	30	24,84	312,2	1,31	0,18	1437,
50	-1,44	31,58	50	25,42	256,2	1,86	0,40	1439,
75	-1,37	32,05	74	25,80	220,4	2,44	0,77	1440,

REFERENCE NO, 75-2- 98 STN- BSOC DATE 3/ 5/75 GMT 6,1
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,40	26,99	0	21,71	610,7	0,0	0,0	1432,
1	-1,43	26,99	1	21,71	611,2	0,06	0,00	1431,
3	-1,44	26,96	3	21,68	613,7	0,18	0,00	1431,
5	-1,45	27,00	5	21,71	610,6	0,31	0,01	1431,
7	-1,51	28,29	7	22,76	510,8	0,42	0,01	1433,
10	-1,57	29,65	10	23,86	405,1	0,55	0,03	1435,
15	-1,59	29,82	15	24,00	392,2	0,75	0,05	1435,
20	-1,60	30,08	20	24,21	372,2	0,94	0,09	1435,
30	-1,47	30,97	30	24,93	303,3	1,28	0,17	1437,
50	-1,44	31,65	50	25,48	250,7	1,83	0,39	1439,
75	-1,38	32,12	74	25,86	214,6	2,39	0,75	1440,

REFERENCE NO, 75-2- 99 STN- BSOC DATE 3/ 5/75 GMT 14,7
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- 90 WAVE P/H AIR TEMP -10,0 WW
WIND SPD- 05 SWELL P/H WET BLB . CLD-A
SWELL D BARO 1018,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,45	26,86	0	21,60	620,9	0,0	0,0	1431,
1	-1,45	26,81	1	21,57	624,9	0,06	0,00	1431,
3	-1,46	26,68	3	21,46	635,0	0,19	0,00	1431,
5	-1,46	26,69	5	21,46	634,7	0,32	0,01	1431,
7	-1,52	27,86	7	22,41	543,7	0,44	0,02	1432,
10	-1,59	29,45	10	23,70	420,9	0,57	0,03	1434,
15	-1,60	29,64	15	23,86	405,8	0,78	0,05	1435,
20	-1,61	29,91	20	24,07	385,2	0,98	0,09	1435,
30	-1,46	30,71	30	24,71	323,9	1,34	0,18	1437,
50	-1,43	31,46	50	25,32	265,6	1,92	0,41	1439,
75	-1,40	31,82	75	25,62	237,6	2,54	0,81	1440,

REFERENCE NO, 75-2-100 STN- BSOC DATE 3/ 5/75 GMT 15,5
POSITION 69-36,7N, 137-58,1W DEPTH 76

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,48	26,27	0	21,13	666,5	0,0	0,0	1430,
1	-1,47	26,29	1	21,14	665,5	0,07	0,00	1430,
3	-1,46	26,25	3	21,11	668,3	0,20	0,00	1430,
5	-1,46	26,25	5	21,11	668,5	0,33	0,01	1430,
7	-1,51	27,19	7	21,87	595,3	0,46	0,02	1431,
10	-1,58	29,01	10	23,34	455,0	0,61	0,03	1434,
15	-1,59	29,19	15	23,49	440,6	0,83	0,06	1434,
20	-1,60	29,54	20	23,77	414,0	1,05	0,10	1434,
30	-1,47	30,38	30	24,45	348,9	1,43	0,19	1436,
50	-1,41	31,30	50	25,19	277,9	2,05	0,44	1438,
75	-1,39	31,85	75	25,64	235,6	2,68	0,84	1440,

REFERENCE NO, 75-2-101 STN- BSOC DATE 3/ 5/75 GMT 17.6
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.44	27.03	0	21.74	608.0	0.0	0.0	1431.
1	-1.44	27.03	1	21.74	608.0	0.06	0.00	1431.
3	-1.45	26.96	3	21.69	613.2	0.18	0.00	1431.
5	-1.46	27.01	5	21.72	609.9	0.31	0.01	1431.
7	-1.53	28.56	7	22.98	489.8	0.42	0.01	1433.
10	-1.58	29.70	10	23.90	401.6	0.55	0.03	1435.
15	-1.59	29.86	15	24.03	389.2	0.74	0.05	1435.
20	-1.60	30.16	20	24.27	366.2	0.93	0.08	1435.
30	-1.46	30.96	30	24.92	304.3	1.27	0.17	1437.
50	-1.41	31.70	50	25.51	247.6	1.81	0.39	1439.
75	-1.39	32.07	74	25.81	218.9	2.39	0.75	1440.

REFERENCE NO, 75-2-102 STN- BSOC DATE 3/ 5/75 GMT 19.4
POSITION 69-36.7N, 137-58.1W DEPTH 76

WIND DIR- 090	WAVE P/H	AIR TEMP -8.5	WW
WIND SPD- 09	SWELL P/H	WET BLB .	CLD-A 8
	SWELL D	BARO 1016.2	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.34	27.12	0	21.81	601.3	0.0	0.0	1432.
1	-1.39	27.02	1	21.73	609.0	0.06	0.00	1432.
3	-1.44	26.89	3	21.63	619.1	0.18	0.00	1431.
5	-1.45	26.89	5	21.63	619.0	0.31	0.01	1431.
7	-1.51	27.96	7	22.49	536.2	0.43	0.02	1433.
10	-1.57	29.62	10	23.84	407.6	0.56	0.03	1435.
15	-1.59	29.82	15	24.00	392.2	0.76	0.05	1435.
20	-1.60	30.08	20	24.21	371.8	0.95	0.09	1435.
30	-1.46	30.93	30	24.89	307.0	1.29	0.17	1437.
50	-1.41	31.62	50	25.45	253.2	1.84	0.39	1439.
75	-1.37	32.01	74	25.77	223.3	2.43	0.77	1440.

REFERENCE NO. 75-2-103   STN- BS0C   DATE 3/ 5/75   GMT 21.3
POSITION 69-36.7N, 137-58.1W   DEPTH 76

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.43	27.13	0	21.82	600.6	0.0	0.0	1432.
1	-1.44	27.04	1	21.75	607.4	0.06	0.00	1431.
3	-1.45	26.96	3	21.69	613.2	0.18	0.00	1431.
5	-1.45	26.93	5	21.66	615.7	0.31	0.01	1431.
7	-1.51	28.00	7	22.52	533.2	0.42	0.02	1433.
10	-1.59	29.70	10	23.90	401.1	0.56	0.03	1435.
15	-1.60	29.90	15	24.06	385.9	0.75	0.05	1435.
20	-1.60	30.15	20	24.27	366.5	0.94	0.08	1435.
30	-1.49	30.95	30	24.91	304.7	1.28	0.17	1437.
50	-1.42	31.71	50	25.53	246.5	1.82	0.39	1439.
75	-1.36	32.08	74	25.82	218.2	2.39	0.75	1440.

REFERENCE NO. 75-2-105   STN- BS21   DATE 5/ 5/75   GMT 22.3
POSITION 70- 6.5N, 131-21.0W   DEPTH 16

WIND DIR- 90   WAVE P/H   AIR TEMP .   WW
WIND SPD- 09   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.20	4.73	0	3.74	2362.8	0.0	0.0	1408.
1	-0.23	4.62	1	3.65	2372.4	0.24	0.00	1407.
3	-0.26	4.32	3	3.41	2396.4	0.72	0.01	1407.
5	-0.74	15.88	5	12.74	1477.9	1.16	0.03	1420.
7	-1.61	29.98	7	24.13	379.5	1.27	0.04	1435.
10	-1.66	30.66	10	24.68	327.4	1.38	0.04	1436.

REFERENCE NO, 75-2-106   STN- BS22   DATE 5/ 5/75   GMT 22,9
POSITION 70-25,2N, 131-53,0W   DEPTH 35

WIND DIR-   WAVE P/H   AIR TEMP .   WW
WIND SPD-   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 0,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,16	24,64	0	19,81	793,2	0,0	0,0	1430,
1	-1,16	24,67	1	19,83	791,2	0,08	0,00	1430,
3	-1,18	24,87	3	20,00	775,5	0,24	0,00	1430,
5	-1,63	29,97	5	24,12	380,7	0,34	0,01	1435,
7	-1,65	30,51	7	24,55	339,2	0,41	0,01	1435,
10	-1,66	30,66	10	24,68	327,2	0,51	0,02	1436,
15	-1,66	30,70	15	24,71	324,5	0,67	0,04	1436,
20	-1,66	30,73	20	24,74	321,8	0,84	0,07	1436,
30	-1,61	30,78	30	24,78	317,7	1,16	0,15	1436,

REFERENCE NO, 75-2-107   STN- BS23   DATE 6/ 5/75   GMT 0,0
POSITION 70-25,2N, 132-18,2W   DEPTH 35

WIND DIR-   WAVE P/H   AIR TEMP .   WW
WIND SPD-   SWELL P/H   WET BLB .   CLD-A
SWELL D   BARO 0,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,63	31,71	0	25,53	246,5	0,0	0,0	1437,
1	-1,68	31,46	1	25,33	265,9	0,03	0,00	1437,
3	-1,70	31,19	3	25,11	286,7	0,08	0,00	1436,
5	-1,70	31,18	5	25,10	287,0	0,14	0,00	1436,
7	-1,70	31,14	7	25,07	289,9	0,20	0,01	1436,
10	-1,70	31,15	10	25,07	289,8	0,28	0,01	1436,
15	-1,70	31,14	15	25,07	289,9	0,43	0,03	1436,
20	-1,70	31,14	20	25,07	289,9	0,57	0,06	1436,
30	-1,67	31,36	30	25,25	272,8	0,85	0,13	1437,

REFERENCE NO, 75-2-108 STN= BS24 DATE 6/ 5/75 GMT 0,4
POSITION 70-13,2N, 132-44,2W DEPTH 31

WIND DIR=	WAVE P/H	AIR TEMP	.	WW
WIND SPD=	SWELL P/H	WET BLB	.	CLD=A
	SWELL D	BARO	0,0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,19	26,37	0	21,21	659,0	0,0	0,0	1432,
1	-1,19	26,37	1	21,21	659,1	0,07	0,00	1432,
3	-1,28	27,03	3	21,74	608,4	0,20	0,00	1432,
5	-1,62	29,93	5	24,09	383,9	0,28	0,01	1435,
7	-1,64	30,16	7	24,28	365,6	0,36	0,01	1435,
10	-1,65	30,44	10	24,50	344,7	0,46	0,02	1435,
15	-1,66	30,47	15	24,53	341,5	0,63	0,04	1435,
20	-1,62	30,65	20	24,67	327,7	0,80	0,07	1436,
30	-1,51	31,23	30	25,14	283,3	1,11	0,15	1437,

REFERENCE NO, 75-2-109 STN= BS25 DATE 6/ 5/75 GMT 1,3
POSITION 69-58,6N, 132-56,6W DEPTH 18

WIND DIR=	WAVE P/H	AIR TEMP	.	WW
WIND SPD=	SWELL P/H	WET BLB	.	CLD=A
	SWELL D	BARO	0,0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,55	29,45	0	23,70	420,6	0,0	0,0	1434,
1	-1,56	29,55	1	23,78	413,3	0,04	0,00	1434,
3	-1,54	29,99	3	24,14	379,1	0,12	0,00	1435,
5	-1,50	30,42	5	24,49	345,9	0,19	0,00	1436,
7	-1,51	30,51	7	24,55	339,2	0,26	0,01	1436,
10	-1,59	30,78	10	24,77	318,5	0,36	0,02	1436,
15	-1,66	31,14	15	25,07	290,4	0,51	0,04	1436,

REFERENCE NO. 75-2-110 STN- BS26 DATE 9/ 5/75 GMT 20.4
POSITION 69-59.3N, 133-10.0W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.75	16.22	0	13.02	1450.7	0.0	0.0	1420.
1	-0.84	16.59	1	13.31	1421.9	0.14	0.00	1420.
3	-1.03	24.96	3	20.07	768.6	0.39	0.01	1431.
5	-1.47	29.08	5	23.40	449.4	0.50	0.01	1434.
7	-1.55	29.67	7	23.88	403.6	0.59	0.02	1435.
10	-1.59	30.19	10	24.30	363.7	0.70	0.03	1435.
15	-1.63	30.52	15	24.57	338.1	0.88	0.05	1436.
20	-1.65	30.68	20	24.70	325.5	1.04	0.08	1436.

REFERENCE NO. 75-2-111 STN- BS27 DATE 9/ 5/75 GMT 20.8
POSITION 70-22.8N, 133-24.3W DEPTH 49

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.62	30.63	0	24.65	329.8	0.0	0.0	1436.
1	-1.62	30.48	1	24.54	341.2	0.03	0.00	1435.
3	-1.63	30.30	3	24.39	354.9	0.10	0.00	1435.
5	-1.63	30.27	5	24.36	357.6	0.17	0.00	1435.
7	-1.64	30.23	7	24.33	360.3	0.25	0.01	1435.
10	-1.64	30.23	10	24.33	360.2	0.35	0.02	1435.
15	-1.64	30.23	15	24.33	360.1	0.53	0.04	1435.
20	-1.64	30.23	20	24.33	360.1	0.71	0.07	1435.
30	-1.58	30.60	30	24.63	331.7	1.06	0.16	1436.

REFERENCE NO. 75-2-112 STN- BS28 DATE 9/ 5/75 GMT 21.6
POSITION 70-43.8N, 133-26.8W DEPTH 60

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.63	30.45	0	24.51	343.3	0.0	0.0	1435.
1	-1.63	30.45	1	24.51	343.6	0.03	0.00	1435.
3	-1.63	30.38	3	24.45	349.1	0.10	0.00	1435.
5	-1.63	30.38	5	24.45	349.2	0.17	0.00	1435.
7	-1.63	30.30	7	24.39	354.9	0.24	0.01	1435.
10	-1.63	30.30	10	24.39	354.9	0.35	0.02	1435.
15	-1.64	30.31	15	24.40	354.1	0.53	0.04	1435.
20	-1.66	30.40	20	24.47	347.5	0.71	0.07	1435.
30	-1.67	30.77	30	24.77	318.5	1.04	0.16	1436.
50	-1.39	31.57	50	25.41	257.5	1.64	0.40	1439.

REFERENCE NO. 75-2-113 STN- BS29 DATE 9/ 5/75 GMT 22.3
POSITION 71- 9.2N, 133-32.5W DEPTH 86

WIND DIR- 280 WAVE P/H AIR TEMP . WW
WIND SPD- 00 SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.59	30.99	0	24.95	301.6	0.0	0.0	1436.
1	-1.59	30.96	1	24.92	304.7	0.03	0.00	1436.
3	-1.59	30.85	3	24.83	313.0	0.09	0.00	1436.
5	-1.60	30.78	5	24.78	317.9	0.15	0.00	1436.
7	-1.60	30.79	7	24.78	317.6	0.22	0.01	1436.
10	-1.66	30.78	10	24.77	318.3	0.31	0.02	1436.
15	-1.68	30.78	15	24.78	317.6	0.47	0.04	1436.
20	-1.69	30.73	20	24.74	321.8	0.63	0.06	1436.
30	-1.69	30.79	30	24.79	316.8	0.95	0.15	1436.
50	-1.46	31.35	50	25.24	274.0	1.56	0.39	1438.
75	-1.44	31.97	74	25.74	226.0	2.19	0.79	1440.

REFERENCE NO, 75-2-114 STN- BS30 DATE 9/ 5/75 GMT 23,4
POSITION 71-18,3N, 134-45,3W DEPTH 900

WIND DIR- 270 WAVE P/H AIR TEMP . WW
WIND SPD- 13 SWELL P/H WET BLB . CLD-A
SWELL D BARO 0,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,64	30,83	0	24,82	313,8	0,0	0,0	1436,
1	-1,65	30,84	1	24,83	313,3	0,03	0,00	1436,
3	-1,66	30,78	3	24,78	318,0	0,09	0,00	1436,
5	-1,67	30,71	5	24,72	323,6	0,16	0,00	1436,
7	-1,67	30,64	7	24,66	329,2	0,22	0,01	1436,
10	-1,67	30,64	10	24,66	329,0	0,32	0,02	1436,
15	-1,68	30,64	15	24,66	329,0	0,49	0,04	1436,
20	-1,68	30,64	20	24,67	328,6	0,65	0,07	1436,
30	-1,68	30,71	30	24,72	323,2	0,98	0,15	1436,
50	-1,69	30,86	50	24,84	311,4	1,61	0,41	1436,
75	-1,47	31,27	74	25,17	279,7	2,36	0,88	1438,
100	-1,43	31,95	99	25,72	227,5	2,99	1,44	1440,
125	-1,41	32,65	124	26,29	173,7	3,49	2,01	1441,
150	-1,01	33,07	149	26,62	142,5	3,89	2,57	1444,

REFERENCE NO, 75-2-115 STN- BS31 DATE 10/ 5/75 GMT 0,5
POSITION 70-44,1N, 134-44,8W DEPTH 56

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0,0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1,59	30,48	0	24,53	341,1	0,0	0,0	1436,
1	-1,60	30,45	1	24,51	344,0	0,03	0,00	1435,
3	-1,61	30,21	3	24,32	362,0	0,11	0,00	1435,
5	-1,61	30,21	5	24,32	361,9	0,18	0,00	1435,
7	-1,61	30,07	7	24,20	373,2	0,25	0,01	1435,
10	-1,61	30,06	10	24,20	373,4	0,36	0,02	1435,
15	-1,61	30,06	15	24,19	373,5	0,55	0,04	1435,
20	-1,61	30,06	20	24,19	373,6	0,74	0,08	1435,
30	-1,61	30,19	30	24,30	363,0	1,11	0,17	1436,
50	-1,39	31,49	50	25,35	263,5	1,73	0,42	1439,

REFERENCE NO. 75-2-116 STN- BS32 DATE 10/ 5/75 GMT 1.3
POSITION 70-21.3N, 134-36.8W DEPTH 41

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.60	30.42	0	24.49	345.7	0.0	0.0	1435.
1	-1.61	30.38	1	24.45	349.2	0.03	0.00	1435.
3	-1.61	30.17	3	24.28	365.0	0.11	0.00	1435.
5	-1.61	30.14	5	24.26	367.7	0.18	0.00	1435.
7	-1.61	30.10	7	24.23	370.4	0.25	0.01	1435.
10	-1.61	30.10	10	24.23	370.5	0.36	0.02	1435.
15	-1.62	30.10	15	24.23	370.2	0.55	0.04	1435.
20	-1.62	30.10	20	24.23	370.4	0.73	0.08	1435.
30	-1.59	30.50	30	24.55	339.3	1.10	0.17	1436.

REFERENCE NO. 75-2-117 STN- BS33 DATE 10/ 5/75 GMT 1.8
POSITION 70- 6.6N, 134-29.4W DEPTH 21

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.50	30.21	0	24.31	362.1	0.0	0.0	1436.
1	-1.54	30.11	1	24.23	370.2	0.04	0.00	1435.
3	-1.58	30.00	3	24.14	378.7	0.11	0.00	1435.
5	-1.58	29.99	5	24.14	378.8	0.19	0.00	1435.
7	-1.59	30.01	7	24.15	377.7	0.26	0.01	1435.
10	-1.61	30.06	10	24.20	373.4	0.38	0.02	1435.
15	-1.61	30.24	15	24.34	359.5	0.56	0.04	1435.
20	-1.62	30.24	20	24.34	359.3	0.74	0.07	1435.

REFERENCE NO. 75-2-118 STN- BS34 DATE 10/ 5/75 GMT 2.2
POSITION 69-51.4N, 134- 8.8W DEPTH 6

WIND DIR-	WAVE P/H	AIR TEMP	.	WW
WIND SPD-	SWELL P/H	WET BLB	.	CLD-A
	SWELL D	BARO	0.0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.12	1.24	0	0.92	2643.8	0.0	0.0	1405.
1	0.04	1.24	1	0.92	2644.2	0.26	0.00	1404.
3	-0.07	1.16	3	0.84	2651.4	0.79	0.01	1404.
5	-0.17	2.44	5	1.88	2547.5	1.32	0.03	1405.

REFERENCE NO. 75-2-119 STN- BS35 DATE 10/ 5/75 GMT 16.3
POSITION 69-38.7N, 137- 5.0W DEPTH 34

WIND DIR-	WAVE P/H	AIR TEMP	.	WW
WIND SPD-	SWELL P/H	WET BLB	.	CLD-A
	SWELL D	BARO	0.0	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-1.50	27.95	0	22.49	536.4	0.0	0.0	1432.
1	-1.51	27.76	1	22.33	551.5	0.05	0.00	1432.
3	-1.52	27.54	3	22.15	568.9	0.17	0.00	1432.
5	-1.52	27.50	5	22.12	571.7	0.28	0.01	1432.
7	-1.53	27.65	7	22.24	559.8	0.40	0.01	1432.
10	-1.61	29.21	10	23.51	439.0	0.54	0.03	1434.
15	-1.63	30.04	15	24.18	375.3	0.74	0.05	1435.
20	-1.60	30.56	20	24.60	335.0	0.92	0.08	1436.

REFERENCE NO. 75-2-120 STN- BS36 DATE 10/ 5/75 GMT 17.0
POSITION 69-52.3N, 137- 2.6W DEPTH 35

WIND DIR- WAVE P/H AIR TEMP . WW
WIND SPD- SWELL P/H WET BLB . CLD-A
SWELL D BARO 0.0

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	-0.66	22.01	0	17.69	997.6	0.0	0.0	1428.
1	-0.68	22.03	1	17.70	996.3	0.10	0.00	1428.
3	-1.11	25.27	3	20.32	744.5	0.28	0.00	1431.
5	-1.44	28.33	5	22.79	507.3	0.40	0.01	1433.
7	-1.47	28.80	7	23.17	471.5	0.50	0.01	1434.
10	-1.59	29.82	10	24.00	392.5	0.63	0.03	1435.
15	-1.61	30.09	15	24.22	371.0	0.82	0.05	1435.
20	-1.64	30.15	20	24.27	366.2	1.00	0.08	1435.
30	-1.56	30.77	30	24.77	318.6	1.35	0.17	1437.

Bottle Salinities - Ice Camp B

DATE	TIME (GMT)	DEPTH (m)	SALINITY ($^0/_{00}$)
27-04-75	0635	0	4.88
		3	29.88
		5	30.59
		7	30.59
	0537	10	30.62
		15	31.12
		20	31.26
28-04-75	0503	0	4.86
		3	6.65
		5	29.79
	0447	7	30.44
		10	30.78
	0435	15	30.96
		20	31.15

Bottle Salinities - Ice Camp C

Date	Time (GMT)	Depth (m)	Salinity ($^0/_{00}$)
02-05-75	0833	3	25.56
		5	27.78
		7	29.16
	0805	10	30.24
		15	30.56
		20	30.91
	0600	30	31.79
		50	32.69
	0700	65	32.81

Bottle Salinities - 75-2

Station Number	Date	Time (GMT)	Depth (m)	Salinity ($^0/_{00}$)
23	05-05-75	2350	0	31.17
			10	31.32
			20	31.33
			30	31.53
24	06-05-75	0030	0	25.32
			10	30.92
			30	31.70
25	06-05-75	0117	0	25.53
			10	30.95
			18	30.60
26	09-05-75	2020	0	31.41
			10	31.47
			20	31.45
			30	31.46
27	09-05-75	2050	0	30.91
			10	30.94
			20	30.90
			30	31.27
30	09-05-75	2315	0	31.24
			10	31.26
			20	31.30
			30	31.36
37	05-05-75	2325	10	31.52
			20	31.52
			30	31.56

SUMMER 75-3

Transmissiometer

In-Situ Salinometer

Bottle Cast

75-4

CTD Cast

Turbidity (% Transmittance)
Summer 75-3

Station #	Date	Time (GMT)	Depth (m)	% Transmittance
Canmar Barge	14-08-75	1930	1	55
			3	55
			5	56
			7	56
			10	35
			15	78
			20	17
			25	23
Canmar Barge	15-08-75	0030	1	60
			3	60
			5	61
			7	59
			10	79
			15	85
			20	12
			25	18
Canmar Barge	15-08-75	0220	1	60
			3	60
			5	65
			7	65
			10	71
			15	80
			20	11
			25	27
Canmar Barge	15-08-75	1500	1	67
			3	68
			5	71
			7	74
			10	71
			15	24
			20	14
			25	26
Canmar Barge	15-08-75	1620	1	61
			3	61
			5	67
			7	68
			10	68
			15	16
			20	15
			25	37

.....2

Turbidity (% Transmittance)
Summer 75-3 (Page Two)

Station #	Date	Time (GMT)	Depth (m)	% Transmittance
Canmar Barge	15-08-75	2030	1	65
			3	65
			5	65
			7	74
			10	74
			15	16
			20	15
			25	31
Canmar Barge	15-08-75	2130	1	61
			3	61
			5	61
			7	66
			10	70
			15	59
			20	15
			25	24
Canmar Barge	16-08-75	0310	1	64
			3	65
			5	65
			7	70
			10	78
			15	14
			20	13
			25	49
Canmar Barge	16-08-75	0640	1	63
			3	63
			5	64
			7	63
			10	76
			15	25
			20	16
			25	42
Canmar Barge	16-08-75	2130	1	63
			3	63
			5	63
			7	62
			10	84
			15	22
			20	24
			25	35

In Situ Salinometer
Summer 75-3

Cruise Ref. No.: 75-3	Stn.: Canmar Barge	Position:	70°10.6'N
GMT: 1730	Depth: 27 m.		132°58.9'W
Wind Dir.: 100	Wave P/H:	Air Temp:	WW:
Wind Spd.: 14 knots	Swell P/H:	Wet BLB:	CLD.A:
	Swell Dir.:	Baro:	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
14-08-75	0	5.12	11.11
	1	5.15	11.24
	3	5.09	11.25
	5	4.53	12.11
	7	3.13	13.30
	10	4.68	17.23
	15	4.61	22.86
	20	-0.16	28.01
	25	-1.04	28.46
	27	-1.10	28.77

Cruise Ref. No.: 75-3	Stn.: Canmar Barge	Position:	70°10.6'N
GMT: 2110	Depth: 27 m.		132°58.9'W
Wind Dir.: 110	Wave P/H:	Air Temp:	WW:
Wind Spd.: 10 knots	Swell P/H:	Wet BLB:	CLD.A:
	Swell Dir.:	Baro:	

Date	Depth (m)	Temperature (°C)	Salinity (‰)
14-08-75	0	5.36	10.93
	3	5.40	11.03
	6	5.03	11.44
	9	4.85	14.71
	12	4.41	20.37
	15	4.23	24.12
	18	0.95	26.32
	21	0.35	27.46
	24	-1.23	28.73
	27	-0.78	28.45

In Situ Salinometer
Summer 75-3 (Page 2)

Cruise Ref. No.: 75-3 Stn.: Canmar Barge Position: 70°10.6'N 132°58.9'W
GMT: 0045 Depth: 27 m.

Wind Dir.: 110 Wave P/H: Air Temp.: WW:
Wind Spd.: 15 knots Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
15-08-75	0	6.52	10.79
	3	5.54	11.44
	6	3.48	13.14
	9	5.23	19.21
	12	3.01	21.99
	15	4.54	24.89
	18	1.26	26.42
	21	-0.40	27.80
	24	-0.01	27.75
	27	-1.21	28.58

Cruise Ref. No.: 75-3 Stn.: Canmar Barge Position: 70°10.6'N 132°58.9'W
GMT: 0300 Depth: 27 m.

Wind Dir.: 120 Wave P/H: Air Temp: WW:
Wind Spd.: 15 knots Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
15-08-75	0	6.28	11.00
	3	5.32	11.25
	6	4.81	14.72
	9	2.53	18.04
	12	4.61	21.79
	15	3.68	25.35
	18	0.57	26.44
	21	-0.87	27.97
	24	-1.22	28.32
	27	-1.20	28.35

In Situ Salinometer
Summer 75-3 (Page 3)

Cruise Ref. No.: 75-3 Stn.: Canmar Barge Position: 70°10.6'N.
GMT: 1515 Depth: 27 m. 132°58.9'W.

Wind Dir.: 153 Wave P/H: Air Temp: WW:
Wind Spd.: 16 knots Swell P/H: Wet BLB: CLD.A:
Swell Dir: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (⁰/₀₀)
15-08-75	0	5.16	11.13
	3	5.31	11.80
	6	2.99	16.32
	9	2.22	19.53
	12	2.43	20.99
	15	1.12	26.51
	18	0.39	26.92
	21	-0.80	28.50
	24	-1.45	28.85
	27	-1.49	28.91

Cruise Ref. No.: 75-3 Stn: Canmar Barge Position: 70°10.6'N
GMT: 1800 Depth: 27 m. 132°58.9'W

Wind Dir. Wave P/H: Air Temp: WW:
Wind Spd. Swell P/H: Wet BLB: CLD.A:
Swell Dir.: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (⁰/₀₀)
15-08-75	0	4.98	11.05
	3	4.95	11.11
	6	3.03	16.45
	9	2.45	18.87
	12	2.55	20.49
	15	1.47	26.25
	18	0.13	27.46
	21	-0.20	27.92
	24	-1.46	28.93
	27	-1.51	28.92

In Situ Salinometer
Summer 75-3 (Page 4)

Cruise Ref. No.: 75-3
GMT: 0000

Stn.: Canmar Barge
Depth: 27 m.

Position: 70°10.6'N
132°58.9'W

Wind Dir.: 180
Wind Spd.: 7 knots

Wave P/H:
Swell P/H:
Swell Dir.:

Air Temp:
Wet BLB:
Baro:

WW:
CLD.A:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
16-08-75	0	6.11	11.10
	3	4.92	11.10
	6	4.30	15.18
	9	2.11	19.12
	12	2.26	21.20
	15	4.20	25.13
	18	0.89	26.78
	21	0.08	27.47
	24	-0.64	27.94
	27	-1.18	28.64

Cruise Ref. No.: 75-3
GMT: 0230

Stn: Canmar Barge
Depth: 27 m.

Position: 70°10.6'N
132°58.9'W

Wind Dir.: 060
Wind Spd.: 7 knots

Wave P/H:
Swell P/H:
Swell Dir.:

Air Temp:
Wet BLB:
Baro:

WW:
CLD.A:

Date	Depth (m)	Temperature (°C)	Salinity (‰)
16-08-75	0	6.00	11.16
	3	5.49	11.30
	6	3.95	13.54
	9	2.40	18.78
	12	2.33	20.40
	15	2.19	25.39
	18	0.35	26.90
	21	0.30	27.18
	24	-1.03	28.98
	27	-0.85	28.40

In Situ Salinometer
Summer 75-3 (Page 5)

Cruise Ref. No.: 75-3   Stn: Canmar Barge   Position: 70°10.6'N
GMT: 0600   Depth: 27 m.   132°58.9'W

Wind Dir.:   Wave P/H: Air Temp: WW:
Wind Spd.:   Swell P/H: Wet BLB: CLD.A:
Swell Dir.:   Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
16-08-75	0	6.23	11.21
	3	5.09	11.46
	6	4.24	12.21
	9	2.21	18.88
	12	2.03	19.78
	15	2.24	25.31
	18	0.87	26.77
	21	0.81	27.40
	24	-1.14	28.49
	27	-1.31	28.77

Cruise Ref. No.: 75-3   Stn: Canmar Barge   Position: 70°10.6'N
GMT: 0800   Depth: 27 m.   132°58.9'W

Wind Dir: Wave P/H: Air Temp: WW:
Wind Spd: Swell P/H: Wet BLB: CLD.A.
Swell Dir: Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/oo)
16-08-75	0	5.88	10.66
	3	5.81	11.22
	6	3.42	13.78
	9	2.14	18.18
	12	2.16	19.10
	15	2.28	24.08
	18	3.16	26.00
	21	0.24	27.24
	24	-0.82	28.36

In Situ Salinometer
Summer 75-3 (Page 6)

Cruise Ref. No.: 75-3
GMT: 1200

Stn.: Canmar Barge
Depth: 27 m.

Position: 70°10.6'N
132°58.9'W

Wind Dir.:
Wind Spd.:

Wave P/H:
Swell P/H:
Swell Dir:

Air Temp:
Wet BLB:
Baro:

WW:
CLD.A:

Date	Depth (m)	Temperature (°C)	Salinity (°/°°)
16-08-75	0	5.21	10.99
	3	5.70	11.28
	6	4.17	12.20
	9	4.62	17.95
	12	4.34	22.10
	15	2.33	25.35

Cruise Ref. No.: 75-3
GMT: 1730

Stn: Canmar Barge
Depth: 27 m.

Position: 70°10.6'N
132°58.9'W

Wind Dir.:
Wind Spd.:

Wave P/H:
Swell P/H:
Swell Dir.:

Air Temp:
Wet BLB:
Baro:

WW:
CLD.A.:

Date	Depth (m)	Temperature (°C)	Salinity (°/°°)
16-08-75	0	6.35	11.08
	3	5.60	11.36
	6	3.90	11.73
	9	2.20	17.96
	12	4.75	23.08
	15	1.71	25.95
	18	0.50	27.24
	21	-1.08	28.58
	24	-1.12	28.67
	27	-1.16	28.41

In Situ Salinometer
Summer 75-3 (Page 7)

Cruise Ref. NO.: 75-3   Stn.: Canmar Barge   Position: 70°10.6'N 132°58.9'W
GMT: 2100   Depth: 27 m.

Wind Dir: Wave P/H: Air Temp.:   WW:
Wind Spd: Swell P/H: Wet BLB: CLD.A:
Swell Dir.:   Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/₀₀)
16-08-75	0	7.58	11.02
	3	6.00	10.97
	6	3.74	11.54
	9	5.40	16.62
	12	1.85	22.65
	15	2.08	25.50
	18	0.75	26.95
	21	-0.58	27.90
	24	-0.71	28.38
	27	-1.07	28.25

Cruise Ref. No.: 75-3   Stn.: Canmar Barge   Position: 70°10.6'N 132°58.9'W
GMT: 0000   Depth: 27 m.

Wind Dir.:   Wave P/H: Air Temp: WW:
Wind Spd.:   Swell P/H: Wet BLB: CLD.A:
Swell Dir.:   Baro:

Date	Depth (m)	Temperature (°C)	Salinity (°/₀₀)
17-08-75	0	7.43	10.98
	3	7.10	11.14
	6	4.03	11.80
	9	4.03	18.23
	12	2.45	23.21
	15	4.12	25.33
	18	0.80	27.54
	21	-0.76	28.24
	24	-1.11	28.45
	27	-0.96	28.09

Bottle Cast Canmar Barge Summer 75-3

STATION	DATE	TIME (GMT)	DEPTH (m)	SALINITY ($^{0}/_{00}$)
Canmar Barge	14-08-75	1630	0	12.24
			1	12.25
			3	12.27
			5	13.12
			7	14.34
			10	21.06
			15	27.36
			20	30.61
			25	31.13
			27	31.15
Canmar Barge	16-08-75	1905	0	12.08
			1	12.07
			3	12.40
			5	12.78
			7	13.24
			10	21.77
			15	29.36
			20	31.19
			25	31.24
			27	31.25

REFERENCE NO, 75-3- 1 STN- BS02 DATE 5/ 8/75 GMT 19,3
POSITION 70-40,9N, 134-45,2W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,54	11,03	0	8,76	1867,7	0,0	0,0	1442,
1	5,54	11,03	1	8,76	1867,9	0,19	0,00	1442,
3	5,40	11,08	3	8,80	1863,6	0,56	0,01	1442,
5	4,11	15,28	5	12,19	1531,9	0,91	0,02	1441,
7	2,96	17,55	7	14,04	1351,0	1,19	0,04	1439,
10	2,21	24,38	10	19,51	822,3	1,52	0,07	1445,
15	2,92	27,45	15	21,91	592,2	1,87	0,11	1452,
20	-1,05	30,11	20	24,22	370,6	2,07	0,15	1438,
30	-1,48	30,98	30	24,93	303,0	2,39	0,23	1437,
50	-1,48	31,59	50	25,43	255,6	2,96	0,46	1438,

REFERENCE NO, 75-3- 2 STN- BS03 DATE 6/ 8/75 GMT 19,0
POSITION 69-57,7N, 135-16,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,60	11,96	0	9,33	1811,4	0,0	0,0	1452,
1	7,60	11,96	1	9,33	1811,6	0,18	0,00	1452,
3	7,23	13,11	3	10,26	1720,1	0,54	0,01	1452,
5	7,64	14,60	5	11,40	1609,1	0,87	0,02	1456,
7	6,84	20,00	7	15,70	1190,4	1,14	0,04	1459,
10	6,82	21,57	10	16,93	1071,2	1,48	0,07	1461,
15	-1,05	29,50	15	23,73	418,0	1,80	0,11	1437,
20	-0,99	30,26	20	24,35	359,1	2,00	0,14	1438,

REFERENCE NO. 75-3- 3 STN- BS04 DATE 7/ 8/75 GMT 17.5
POSITION 70-53.2N, 132-28.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.02	26.59	0	21.05	673.9	0.0	0.0	1460.
1	5.02	26.59	1	21.05	674.2	0.07	0.00	1460.
3	4.98	26.65	3	21.10	669.2	0.20	0.00	1460.
5	5.15	26.87	5	21.26	654.0	0.33	0.01	1461.
7	3.47	28.81	7	22.95	492.6	0.45	0.02	1456.
10	4.73	29.86	10	23.67	424.1	0.58	0.03	1463.
15	5.56	30.90	15	24.40	354.5	0.77	0.05	1468.
20	2.75	31.24	20	24.94	303.1	0.93	0.08	1457.
30	-0.55	31.71	30	25.50	249.4	1.21	0.15	1443.
50	-1.50	32.00	50	25.76	224.2	1.68	0.34	1439.

REFERENCE NO. 75-3- 4 STN- BS05 DATE 8/ 8/75 GMT 2.9
POSITION 71-18.9N, 130-36.5W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.25	30.04	0	23.75	415.7	0.0	0.0	1465.
1	5.25	30.04	1	23.75	415.9	0.04	0.00	1465.
3	5.55	30.22	3	23.86	405.3	0.12	0.00	1467.
5	5.66	30.36	5	23.96	395.9	0.20	0.01	1468.
7	5.83	30.39	7	23.96	395.8	0.28	0.01	1468.
10	5.98	30.49	10	24.03	389.9	0.40	0.02	1469.
15	5.21	31.13	15	24.62	333.3	0.58	0.04	1467.
20	2.50	31.55	20	25.20	277.7	0.73	0.07	1456.
30	-1.31	31.71	30	25.53	246.7	0.98	0.13	1439.
50	-1.48	32.36	50	26.06	196.2	1.44	0.32	1440.

REFERENCE NO, 75-3- 5 STN- BS06 DATE 8/ 8/75 GMT 15,3
POSITION 70- 9,2N, 132-14,6W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,73	16,60	0	12,95	1457,3	0,0	0,0	1458,
1	7,73	16,60	1	12,95	1457,6	0,15	0,00	1458,
3	7,74	16,60	3	12,94	1458,1	0,44	0,01	1458,
5	7,74	16,62	5	12,96	1456,0	0,73	0,02	1458,
7	6,99	20,58	7	16,13	1148,2	1,00	0,03	1460,
10	6,92	22,26	10	17,46	1019,9	1,33	0,06	1462,
15	6,22	25,74	15	20,26	750,0	1,77	0,12	1464,
20	-0,08	29,75	20	23,91	401,1	2,02	0,16	1442,

REFERENCE NO, 75-3- 6 STN- BS07 DATE 10/ 8/75 GMT 0,3
POSITION 69-34,2N, 138-55,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4,90	12,86	0	10,23	1722,8	0,0	0,0	1442,
1	4,90	12,86	1	10,23	1723,0	0,17	0,00	1442,
3	4,90	12,89	3	10,26	1720,8	0,52	0,01	1442,
5	4,83	13,00	5	10,35	1711,9	0,86	0,02	1442,
7	3,41	14,84	7	11,87	1562,7	1,19	0,04	1438,
10	2,71	16,50	10	13,21	1431,5	1,64	0,08	1437,

REFERENCE NO. 75-3- 7   STN- BS07   DATE 10/ 8/75   GMT 0.4
POSITION 69-34.2N, 138-55.0W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.87	12.90	0	10.26	1719.7	0.0	0.0	1442.
1	4.87	12.90	1	10.26	1719.9	0.17	0.00	1442.
3	4.06	14.32	3	11.43	1606.2	0.51	0.01	1440.
5	3.21	16.07	5	12.85	1466.9	0.81	0.02	1438.
7	2.85	16.73	7	13.39	1414.1	1.10	0.04	1438.

REFERENCE NO. 75-3- 8   STN- BS07   DATE 10/ 8/75   GMT 0.6
POSITION 69-34.2N, 138-55.0W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.81	12.92	0	10.29	1717.5	0.0	0.0	1441.
1	4.81	12.92	1	10.29	1717.7	0.17	0.00	1441.
3	4.46	13.54	3	10.80	1667.8	0.51	0.01	1441.
5	3.60	15.25	5	12.19	1531.4	0.83	0.02	1439.
7	3.00	16.29	7	13.04	1448.8	1.13	0.04	1438.

REFERENCE NO. 75-3- 9 STN- BS07 DATE 10/ 8/75 GMT 21.7
POSITION 69-34.2N, 138-55.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.64	16.91	0	13.44	1409.3	0.0	0.0	1446.
1	4.64	16.91	1	13.44	1409.5	0.14	0.00	1446.
3	4.62	17.09	3	13.59	1395.3	0.42	0.01	1446.
5	4.30	18.37	5	14.62	1295.0	0.69	0.02	1446.
7	2.12	24.48	7	19.60	814.0	0.91	0.03	1445.

REFERENCE NO. 75-3- 10 STN- BS07 DATE 10/ 8/75 GMT 21.8
POSITION 69-34.2N, 138-55.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.63	16.97	0	13.49	1404.5	0.0	0.0	1446.
1	4.63	16.97	1	13.49	1404.7	0.14	0.00	1446.
3	4.64	17.02	3	13.53	1400.7	0.42	0.01	1446.
5	4.56	17.29	5	13.75	1379.2	0.70	0.02	1446.
7	3.42	21.79	7	17.38	1027.4	0.96	0.03	1447.

REFERENCE NO. 75-3- 11 STN- BS08 DATE 11/ 8/75 GMT 15.8
POSITION 69-22.0N, 137-30.0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.59	14.89	0	11.94	1556.0	0.0	0.0	1434.
1	2.59	14.89	1	11.94	1556.2	0.16	0.00	1434.
3	2.59	14.89	3	11.94	1556.1	0.47	0.01	1434.
5	2.57	14.84	5	11.90	1560.1	0.78	0.02	1434.
7	2.84	15.50	7	12.41	1509.8	1.09	0.04	1436.
10	3.34	16.69	10	13.34	1419.4	1.53	0.08	1440.
15	2.95	20.43	15	16.33	1128.9	2.16	0.16	1443.

REFERENCE NO. 75-3- 12 STN- BS08 DATE 11/ 8/75 GMT 15.9
POSITION 69-22.0N, 137-30.0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.67	15.01	0	12.03	1547.3	0.0	0.0	1435.
1	2.67	15.01	1	12.03	1547.5	0.15	0.00	1435.
3	2.68	14.97	3	12.00	1550.2	0.46	0.01	1435.
5	2.65	14.98	5	12.01	1549.1	0.77	0.02	1434.
7	2.66	15.55	7	12.46	1504.8	1.08	0.04	1435.
10	3.34	16.60	10	13.27	1426.3	1.53	0.08	1440.
15	2.99	20.44	15	16.33	1128.7	2.15	0.16	1443.

REFERENCE NO. 75-3- 13 STN- BS09 DATE 13/ 8/75 GMT 0.9
POSITION 70- 3.9N, 137-41.5W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.45	11.75	0	9.32	1812.2	0.0	0.0	1443.
1	5.45	11.75	1	9.32	1812.4	0.18	0.00	1443.
3	2.93	12.98	3	10.40	1706.2	0.53	0.01	1433.
5	1.93	13.64	5	10.95	1652.6	0.87	0.02	1429.
7	1.84	16.09	7	12.91	1461.4	1.18	0.04	1432.
10	-0.61	27.16	10	21.84	598.7	1.48	0.07	1436.
15	-1.29	29.55	15	23.78	413.2	1.74	0.10	1436.
20	-1.47	30.79	20	24.78	317.5	1.91	0.13	1437.
30	-1.57	31.62	30	25.46	253.0	2.20	0.20	1438.
50	-1.49	32.30	50	26.00	201.0	2.64	0.38	1439.
75	-1.48	32.42	75	26.10	191.4	3.13	0.69	1440.

REFERENCE NO. 75-3- 14 STN- BS10 DATE 13/ 8/75 GMT 6.9
POSITION 70- 7.3N, 137-20.5W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.62	11.22	0	8.83	1860.8	0.0	0.0	1447.
1	6.62	11.22	1	8.83	1861.0	0.19	0.00	1447.
3	6.59	11.20	3	8.82	1862.0	0.56	0.01	1447.
5	6.57	11.20	5	8.82	1861.4	0.93	0.02	1447.
7	6.35	11.30	7	8.92	1852.1	1.30	0.05	1446.
10	1.82	19.20	10	15.40	1219.5	1.82	0.09	1436.
15	-1.40	30.10	15	24.22	370.9	2.09	0.12	1436.
20	-1.52	31.10	20	25.03	293.6	2.26	0.15	1437.
30	-1.50	31.88	30	25.66	233.4	2.51	0.22	1438.

REFERENCE NO. 75-3- 15 STN- BS11 DATE 13/ 8/75 GMT 13.8
POSITION 69-51.9N, 136- 0.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.96	14.12	0	11.08	1640.1	0.0	0.0	1452.
1	6.96	14.12	1	11.08	1640.3	0.16	0.00	1452.
3	6.95	14.12	3	11.08	1639.9	0.49	0.01	1452.
5	6.94	14.12	5	11.08	1639.5	0.82	0.02	1452.
7	6.48	14.78	7	11.63	1585.8	1.14	0.04	1451.
10	4.83	18.74	10	14.88	1269.8	1.57	0.08	1449.
15	4.37	20.36	15	16.19	1142.7	2.18	0.15	1449.

REFERENCE NO. 75-3- 16 STN- BS11 DATE 13/ 8/75 GMT 13.9
POSITION 69-51.9N, 136- 0.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.96	14.06	0	11.04	1644.2	0.0	0.0	1452.
1	6.96	14.06	1	11.04	1644.4	0.16	0.00	1452.
3	6.96	14.06	3	11.04	1644.4	0.49	0.01	1452.
5	6.83	14.14	5	11.11	1637.2	0.82	0.02	1452.
7	6.46	14.81	7	11.66	1582.9	1.14	0.04	1451.
10	4.79	18.50	10	14.69	1287.8	1.57	0.08	1449.
15	4.48	20.09	15	15.96	1164.4	2.18	0.15	1449.

REFERENCE NO. 75-3- 17   STN- BS12   DATE 13/ 8/75   GMT 20.4
POSITION 70- 8.0N, 136- 3.0W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.09	12.57	0	9.99	1746.7	0.0	0.0	1442.
1	5.09	12.57	1	9.99	1746.9	0.17	0.00	1442.
3	4.84	12.69	3	10.10	1736.0	0.52	0.01	1441.
5	3.34	13.72	5	10.98	1649.3	0.86	0.02	1436.
7	1.74	15.86	7	12.73	1479.1	1.19	0.04	1431.
10	-0.69	21.66	10	17.40	1025.4	1.53	0.07	1428.
15	-1.51	31.05	15	25.00	297.1	1.81	0.10	1437.
20	-1.54	31.78	20	25.59	241.0	1.94	0.13	1438.
30	-1.51	32.22	30	25.94	207.1	2.16	0.18	1439.

REFERENCE NO. 75-3- 18   STN- BS13   DATE 14/ 8/75   GMT 0.3
POSITION 70-26.5N, 134-58.9W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.97	14.04	0	11.16	1632.0	0.0	0.0	1444.
1	4.97	14.04	1	11.16	1632.2	0.16	0.00	1444.
3	4.72	14.40	3	11.46	1602.9	0.49	0.01	1443.
5	2.99	16.75	5	13.40	1413.2	0.80	0.02	1438.
7	2.18	19.46	7	15.59	1201.1	1.05	0.04	1438.
10	2.42	20.78	10	16.63	1100.2	1.40	0.07	1441.
15	-0.70	27.56	15	22.16	567.9	1.83	0.12	1436.
20	-1.25	30.13	20	24.24	368.9	2.04	0.16	1437.
30	-1.59	31.24	30	25.15	282.5	2.36	0.24	1437.
50	-1.44	32.32	50	26.02	199.7	2.79	0.41	1440.

REFERENCE NO. 75-3- 19   STN- BS14   DATE 14/ 8/75   GMT 5.8
POSITION 70-20.1N, 134-45.1W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.62	11.93	0	9.39	1805.7	0.0	0.0	1448.
1	6.62	11.93	1	9.39	1805.9	0.18	0.00	1448.
3	6.46	12.01	3	9.46	1798.3	0.54	0.01	1447.
5	6.32	12.03	5	9.49	1795.6	0.90	0.02	1447.
7	5.99	12.10	7	9.56	1788.5	1.26	0.04	1446.
10	5.61	16.39	10	12.97	1455.4	1.78	0.09	1449.
15	-0.42	27.94	15	22.46	539.4	2.22	0.14	1438.
20	-1.00	30.13	20	24.24	369.4	2.44	0.18	1438.
30	-1.55	31.53	30	25.38	260.3	2.75	0.26	1438.

REFERENCE NO. 75-3- 20   STN- BS15   DATE 14/ 8/75   GMT 14.3
POSITION 70- 0.9N, 133-59.9W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.05	13.10	0	10.27	1719.2	0.0	0.0	1451.
1	7.05	13.10	1	10.27	1719.4	0.17	0.00	1451.
3	7.04	13.10	3	10.27	1719.1	0.52	0.01	1451.
5	7.01	13.08	5	10.26	1720.0	0.86	0.02	1451.
7	6.93	13.11	7	10.29	1717.0	1.20	0.04	1451.
10	6.65	13.19	10	10.38	1708.5	1.72	0.09	1450.
15	5.42	15.97	15	12.66	1485.9	2.56	0.19	1448.

REFERENCE NO, 75-3- 21   STN- BS16   DATE 14/ 8/75   GMT 21,1
POSITION 70-19,8N, 134- 0,2W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,04	14,42	0	11,39	1609,6	0,0	0,0	1449,
1	6,04	14,42	1	11,39	1609,8	0,16	0,00	1449,
3	5,76	15,12	3	11,96	1553,9	0,48	0,01	1448,
5	5,37	15,80	5	12,53	1498,8	0,79	0,02	1448,
7	3,24	21,57	7	17,22	1043,1	1,03	0,03	1446,
10	2,54	23,88	10	19,09	862,7	1,31	0,06	1446,
15	2,15	28,45	15	22,75	511,5	1,67	0,10	1450,
20	-0,99	30,41	20	24,46	348,0	1,86	0,14	1439,
30	-1,52	31,42	30	25,30	268,5	2,16	0,21	1438,

REFERENCE NO, 75-3- 22   STN- BS17   DATE 15/ 8/75   GMT 0.5
POSITION 70-41,0N, 133-53,7W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,90	13,74	0	10,86	1661,2	0,0	0,0	1447,
1	5,90	13,74	1	10,86	1661,4	0,17	0,00	1447,
3	4,60	15,69	3	12,48	1503,2	0,49	0,01	1444,
5	4,19	19,32	5	15,38	1221,6	0,76	0,02	1447,
7	3,40	23,43	7	18,69	901,5	0,97	0,03	1449,
10	1,81	26,26	10	21,02	676,7	1,20	0,05	1446,
15	0,60	30,75	15	24,68	327,3	1,45	0,08	1446,
20	0,54	31,15	20	25,01	296,3	1,62	0,11	1447,
30	-1,31	33,00	30	26,56	148,0	1,81	0,16	1441,
50	-1,52	32,33	50	26,03	198,4	2,22	0,33	1439,

REFERENCE NO, 75-3- 23 STN- BS18 DATE 15/ 8/75 GMT 7,9
POSITION 70-31,1N, 133-40,1W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,94	13,12	0	10,37	1709,1	0,0	0,0	1447,
1	5,94	13,12	1	10,37	1709,3	0,17	0,00	1447,
3	5,89	13,17	3	10,41	1705,4	0,51	0,01	1446,
5	5,32	15,21	5	12,06	1544,3	0,84	0,02	1447,
7	4,94	17,12	7	13,60	1394,6	1,13	0,04	1447,
10	2,24	24,46	10	19,57	816,8	1,46	0,07	1445,
15	1,10	27,69	15	22,21	563,4	1,81	0,11	1444,
20	1,38	30,62	20	24,54	340,9	2,03	0,15	1450,
30	-1,48	31,60	30	25,44	254,9	2,31	0,22	1438,
50	-1,53	31,94	50	25,71	228,7	2,80	0,42	1439,

REFERENCE NO, 75-3- 24 STN- BS19 DATE 15/ 8/75 GMT 10,4
POSITION 70-10,0N, 133-20,0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,52	12,43	0	9,86	1759,5	0,0	0,0	1444,
1	5,52	12,43	1	9,86	1759,7	0,18	0,00	1444,
3	5,51	12,41	3	9,84	1761,4	0,53	0,01	1444,
5	4,91	14,06	5	11,18	1629,9	0,88	0,02	1443,
7	4,43	16,05	7	12,78	1473,7	1,18	0,04	1444,
10	3,32	20,57	10	16,42	1120,5	1,57	0,07	1445,
15	2,32	27,06	15	21,64	618,0	2,03	0,13	1449,
20	-0,28	31,40	20	25,24	274,3	2,25	0,17	1443,

REFERENCE NO. 75-3- 25 STN- BS20 DATE 15/ 8/75 GMT 14.3
POSITION 70- 0.2N, 132-59.6W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.85	12.40	0	9.74	1770.8	0.0	0.0	1449.
1	6.85	12.40	1	9.74	1771.0	0.18	0.00	1449.
3	6.84	12.43	3	9.77	1768.6	0.53	0.01	1450.
5	6.85	12.43	5	9.76	1769.0	0.88	0.02	1450.
7	6.84	12.43	7	9.77	1768.7	1.24	0.04	1450.
10	6.57	12.53	10	9.86	1759.0	1.77	0.09	1449.

REFERENCE NO. 75-3- 26 STN- BS21 DATE 15/ 8/75 GMT 21.5
POSITION 70-30.0N, 133- 0.5W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.54	14.64	0	11.53	1596.4	0.0	0.0	1451.
1	6.54	14.64	1	11.53	1596.6	0.16	0.00	1451.
3	5.72	17.49	3	13.83	1372.1	0.47	0.01	1451.
5	5.53	21.48	5	16.98	1066.2	0.71	0.02	1456.
7	5.56	24.19	7	19.11	860.6	0.90	0.03	1459.
10	4.29	27.61	10	21.92	590.7	1.12	0.05	1458.
15	0.88	30.75	15	24.66	329.0	1.33	0.07	1448.
20	-0.75	31.38	20	25.24	273.6	1.48	0.10	1441.
30	-1.59	31.77	30	25.58	241.4	1.74	0.16	1438.

REFERENCE NO. 75-3- 27   STN- BS22   DATE 16/ 8/75   GMT 2.5
POSITION 70-55.2N, 133-22.7W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5.21	16.39	0	13.00	1452.5	0.0	0.0	1448.
1	5.21	16.39	1	13.00	1452.7	0.15	0.00	1448.
3	2.61	20.75	3	16.60	1103.2	0.41	0.01	1442.
5	1.43	26.21	5	21.01	678.2	0.58	0.01	1444.
7	1.16	27.54	7	22.08	575.2	0.71	0.02	1444.
10	0.51	28.02	10	22.50	535.8	0.87	0.03	1442.
15	-0.58	30.07	15	24.18	375.1	1.09	0.06	1440.
20	-1.25	30.71	20	24.71	324.2	1.26	0.09	1438.
30	-1.00	31.21	30	25.11	286.5	1.57	0.17	1440.
50	-1.46	32.12	50	25.86	214.9	2.05	0.37	1439.

REFERENCE NO. 75-3- 28   STN- BS23   DATE 16/ 8/75   GMT 9.1
POSITION 70-31.9N, 132-49.2W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.92	14.88	0	11.68	1581.0	0.0	0.0	1453.
1	6.92	14.88	1	11.68	1581.2	0.16	0.00	1453.
3	6.67	16.00	3	12.58	1493.9	0.47	0.01	1453.
5	5.54	20.32	5	16.07	1154.5	0.74	0.02	1454.
7	5.65	24.19	7	19.10	861.8	0.94	0.03	1460.
10	4.46	27.50	10	21.82	600.6	1.15	0.05	1459.
15	1.16	30.67	15	24.59	335.9	1.38	0.08	1449.
20	-0.57	31.52	20	25.35	263.8	1.52	0.10	1442.
30	-1.46	31.87	30	25.66	234.0	1.77	0.16	1439.

REFERENCE NO. 75-3- 29   STN- BS24   DATE 16/ 8/75   GMT 11.3
POSITION 70-19.9N, 132-20.3W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.24	14.08	0	11.03	1645.2	0.0	0.0	1453.
1	7.24	14.08	1	11.03	1645.4	0.16	0.00	1453.
3	6.98	14.30	3	11.22	1626.8	0.49	0.01	1452.
5	5.13	16.34	5	12.97	1455.7	0.81	0.02	1447.
7	6.19	18.61	7	14.67	1290.0	1.08	0.04	1455.
10	6.00	22.24	10	17.53	1012.7	1.42	0.07	1459.
15	6.12	23.91	15	18.83	887.4	1.89	0.13	1461.
20	2.02	30.07	20	24.06	386.6	2.22	0.18	1452.

REFERENCE NO. 75-3- 30   STN- BS25   DATE 16/ 8/75   GMT 14.6
POSITION 70- 0.8N, 132- 0.7W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.07	12.06	0	9.46	1798.9	0.0	0.0	1450.
1	7.07	12.06	1	9.46	1799.1	0.18	0.00	1450.
3	6.67	13.40	3	10.54	1692.8	0.53	0.01	1450.
5	7.89	14.58	5	11.35	1613.4	0.86	0.02	1457.
7	6.71	15.49	7	12.17	1533.1	1.18	0.04	1453.
10	6.61	16.73	10	13.16	1437.0	1.63	0.08	1454.

REFERENCE NO, 75-3- 31 STN- BS25 DATE 16/ 8/75 GMT 14,6
POSITION 70- 0,8N, 132- 0,7W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,14	12,25	0	9,60	1785,2	0,0	0,0	1450,
1	7,14	12,25	1	9,60	1785,4	0,18	0,00	1451,
3	6,79	13,68	3	10,75	1672,7	0,52	0,01	1451,
5	8,01	14,89	5	11,59	1590,5	0,85	0,02	1457,
7	7,03	15,80	7	12,39	1511,8	1,16	0,04	1455,
10	6,70	16,66	10	13,10	1443,2	1,61	0,08	1454,

REFERENCE NO, 75-3- 32 STN- BS26 DATE 16/ 8/75 GMT 22,1
POSITION 70-29,4N, 132- 2,2W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,70	13,77	0	10,74	1673,5	0,0	0,0	1455,
1	7,70	13,77	1	10,74	1673,7	0,17	0,00	1455,
3	7,12	15,25	3	11,95	1554,8	0,49	0,01	1454,
5	5,71	19,42	5	15,35	1224,6	0,78	0,02	1454,
7	3,33	20,81	7	16,61	1102,2	1,01	0,03	1445,
10	4,13	23,04	10	18,32	936,8	1,32	0,06	1452,
15	5,39	29,25	15	23,11	477,1	1,66	0,10	1465,
20	0,56	31,03	20	24,91	305,8	1,84	0,13	1447,
30	-1,32	31,76	30	25,56	242,9	2,10	0,20	1439,

REFERENCE NO. 75-3- 33   STN- BS27   DATE 17/ 8/75   GMT 2.7
POSITION 70-59.9N, 132- 2.7W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.30	23.43	0	18.62	907.7	0.0	0.0	1453.
1	4.30	23.43	1	18.62	907.9	0.09	0.00	1453.
3	4.00	23.77	3	18.91	880.1	0.27	0.00	1452.
5	3.75	23.95	5	19.07	864.5	0.45	0.01	1451.
7	2.35	26.72	7	21.36	644.6	0.60	0.02	1449.
10	1.27	28.48	10	22.83	503.9	0.76	0.03	1446.
15	3.18	29.80	15	23.76	415.3	0.99	0.06	1457.
20	3.54	31.22	20	24.85	311.3	1.17	0.10	1460.
30	-0.25	31.75	30	25.52	247.2	1.44	0.16	1444.
50	-1.49	32.01	50	25.77	223.6	1.91	0.35	1439.

REFERENCE NO. 75-3- 34   STN- BS28   DATE 17/ 8/75   GMT 9.4
POSITION 70-45.3N, 131-28.4W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.87	19.94	0	15.82	1178.0	0.0	0.0	1451.
1	4.87	19.94	1	15.82	1178.2	0.12	0.00	1451.
3	4.86	21.24	3	16.85	1079.3	0.35	0.01	1452.
5	4.78	24.26	5	19.23	849.0	0.54	0.01	1456.
7	4.79	25.57	7	20.27	749.7	0.70	0.02	1458.
10	4.10	26.17	10	20.80	698.5	0.91	0.04	1456.
15	5.79	27.60	15	21.77	605.4	1.25	0.08	1465.
20	2.74	30.93	20	24.68	327.0	1.46	0.12	1456.
30	-0.94	31.72	30	25.52	247.0	1.72	0.19	1441.

REFERENCE NO, 75-3- 35 STN- BS29 DATE 17/ 8/75 GMT 11,2
POSITION 70-30,9N, 131-30,9W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,02	18,20	0	14,27	1329,1	0,0	0,0	1457,
1	7,02	18,20	1	14,27	1329,3	0,13	0,00	1457,
3	5,85	19,57	3	15,45	1214,5	0,38	0,01	1454,
5	5,35	21,42	5	16,95	1069,2	0,62	0,02	1455,
7	5,39	24,34	7	19,25	847,5	0,81	0,03	1459,
10	4,28	27,25	10	21,64	617,9	1,02	0,04	1458,
15	5,16	28,57	15	22,60	525,7	1,31	0,08	1463,
20	1,99	31,26	20	25,01	296,0	1,50	0,11	1453,
30	-1,19	31,84	30	25,63	237,1	1,75	0,18	1440,

REFERENCE NO, 75-3- 36 STN- BS30 DATE 17/ 8/75 GMT 14,3
POSITION 70-19,3N, 131- 1,8W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,21	14,89	0	11,66	1582,9	0,0	0,0	1454,
1	7,21	14,89	1	11,66	1583,1	0,16	0,00	1454,
3	7,06	14,93	3	11,71	1578,9	0,47	0,01	1454,
5	7,00	14,96	5	11,73	1576,3	0,79	0,02	1453,
7	6,42	15,38	7	12,11	1539,4	1,10	0,04	1452,
10	5,18	16,72	10	13,26	1427,4	1,55	0,08	1448,
15	5,55	23,03	15	18,20	948,7	2,13	0,15	1458,

REFERENCE NO, 75-3- 37 STN- BS31 DATE 17/ 8/75 GMT 21,8
POSITION 70-50,3N, 131- 9,4W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2,70	21,41	0	17,12	1052,7	0,0	0,0	1443,
1	2,70	21,41	1	17,12	1053,0	0,11	0,00	1443,
3	4,05	22,52	3	17,92	975,7	0,31	0,00	1451,
5	3,64	23,11	5	18,41	927,9	0,50	0,01	1450,
7	3,79	27,01	7	21,49	632,4	0,65	0,02	1455,
10	4,75	28,75	10	22,78	508,7	0,82	0,04	1462,
15	5,06	30,88	15	24,43	351,1	1,02	0,06	1466,
20	2,73	32,04	20	25,58	242,2	1,18	0,09	1458,
30	-0,74	31,91	30	25,67	233,4	1,41	0,15	1442,

REFERENCE NO, 75-3- 38 STN- BS32 DATE 18/ 8/75 GMT 1,2
POSITION 71-10,8N, 131-11,2W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4,19	27,14	0	21,56	625,0	0,0	0,0	1457,
1	4,19	27,14	1	21,56	625,3	0,06	0,00	1457,
3	4,18	27,18	3	21,59	622,2	0,19	0,00	1457,
5	3,81	27,49	5	21,87	595,9	0,31	0,01	1456,
7	3,21	27,90	7	22,25	559,8	0,43	0,01	1454,
10	2,37	28,38	10	22,69	517,7	0,58	0,03	1451,
15	4,94	29,19	15	23,11	477,2	0,84	0,06	1463,
20	5,26	30,96	20	24,48	346,6	1,04	0,10	1467,
30	1,31	32,01	30	25,65	235,0	1,32	0,17	1452,
50	-1,45	31,93	50	25,70	229,9	1,75	0,34	1439,

REFERENCE NO. 75-3- 39   STN- BS33   DATE 18/ 8/75   GMT 6.3
POSITION 71- 0.7N, 130-36.3W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	4.35	27.62	0	21.93	589.9	0.0	0.0	1458.
1	4.35	27.62	1	21.93	590.1	0.06	0.00	1458.
3	4.36	27.61	3	21.92	590.9	0.18	0.00	1459.
5	4.36	27.61	5	21.92	591.0	0.30	0.01	1459.
7	4.36	27.64	7	21.94	588.7	0.41	0.01	1459.
10	4.32	27.77	10	22.05	579.0	0.59	0.03	1459.
15	3.76	28.68	15	22.82	505.1	0.86	0.06	1458.
20	3.24	31.22	20	24.88	308.7	1.05	0.10	1459.
30	-0.80	32.11	30	25.84	217.3	1.29	0.16	1442.

REFERENCE NO. 75-3- 40   STN- BS34   DATE 18/ 8/75   GMT 16.1
POSITION 70-23.8N, 130-13.0W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.64	17.79	0	13.89	1365.8	0.0	0.0	1459.
1	7.64	17.79	1	13.89	1366.0	0.14	0.00	1459.
3	7.56	18.24	3	14.25	1331.4	0.41	0.01	1460.
5	7.23	18.63	5	14.59	1298.4	0.67	0.02	1459.
7	6.25	20.24	7	15.94	1167.0	0.92	0.03	1457.
10	5.97	21.43	10	16.90	1073.9	1.25	0.06	1457.
15	6.01	23.24	15	18.32	937.2	1.76	0.13	1460.

REFERENCE NO, 75-3- 41 STN- BS35 DATE 18/ 8/75 GMT 21,8
POSITION 70-56,5N, 129-59,5W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	5,56	23,90	0	18,88	882,3	0,0	0,0	1459,
1	5,56	23,90	1	18,88	882,5	0,09	0,00	1459,
3	5,02	25,57	3	20,25	751,3	0,25	0,00	1459,
5	4,08	26,55	5	21,11	668,9	0,39	0,01	1456,
7	3,61	27,31	7	21,74	607,8	0,52	0,02	1455,
10	4,07	27,42	10	21,79	603,0	0,70	0,03	1457,
15	3,89	29,82	15	23,71	420,1	0,95	0,06	1460,
20	0,49	32,24	20	25,89	212,6	1,10	0,09	1448,
30	-0,48	31,81	30	25,58	241,6	1,33	0,15	1443,

REFERENCE NO, 75-3- 42 STN- BS36 DATE 19/ 8/75 GMT 1,6
POSITION 71-23,3N, 130- 0,8W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,78	28,95	0	23,03	484,5	0,0	0,0	1458,
1	3,78	28,95	1	23,03	484,7	0,05	0,00	1458,
3	3,79	28,94	3	23,02	485,6	0,15	0,00	1458,
5	3,79	29,00	5	23,07	480,9	0,24	0,01	1458,
7	3,79	29,06	7	23,12	476,2	0,34	0,01	1458,
10	3,82	29,10	10	23,14	473,8	0,48	0,02	1458,
15	3,85	29,32	15	23,32	457,3	0,71	0,05	1459,
20	2,97	30,64	20	24,44	350,3	0,92	0,09	1457,
30	-0,94	31,97	30	25,73	227,6	1,20	0,16	1441,
50	-1,36	32,12	50	25,86	215,0	1,65	0,34	1440,

REFERENCE NO, 75-3- 43 STN- BS38 DATE 20/ 8/75 GMT 4,0
POSITION 69-53,8N, 134-58,1W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,19	8,88	0	7,02	2039,0	0,0	0,0	1442,
1	6,19	8,88	1	7,02	2039,2	0,20	0,00	1442,
3	4,29	10,64	3	8,51	1892,3	0,60	0,01	1436,
5	2,81	14,97	5	11,99	1550,7	0,94	0,02	1435,
7	2,88	15,84	7	12,68	1483,3	1,24	0,04	1437,
10	-0,34	25,01	10	20,10	765,4	1,65	0,08	1434,

REFERENCE NO, 75-3- 44 STN- BS39 DATE 20/ 8/75 GMT 10,1
POSITION 70-14,4N, 134-58,2W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	8,70	11,66	0	9,00	1844,1	0,0	0,0	1456,
1	8,70	11,66	1	9,00	1844,3	0,18	0,00	1456,
3	8,60	11,80	3	9,11	1833,1	0,55	0,01	1456,
5	7,57	13,05	5	10,19	1727,0	0,91	0,02	1453,
7	7,22	13,32	7	10,43	1703,7	1,25	0,04	1452,
10	0,08	22,09	10	17,75	991,9	1,65	0,08	1432,
15	-1,05	30,40	15	24,46	348,6	1,92	0,11	1438,
20	-1,48	31,34	20	25,23	274,8	2,07	0,14	1438,
30	-1,47	31,71	30	25,52	246,8	2,32	0,20	1438,

REFERENCE NO, 75-3- 45 STN- BS40 DATE 20/ 8/75 GMT 14,8
POSITION 70-27,6N, 136- 0,1W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	8,04	11,70	0	9,09	1834,6	0,0	0,0	1454,
1	8,04	11,70	1	9,09	1834,9	0,18	0,00	1454,
3	7,99	11,75	3	9,13	1831,2	0,55	0,01	1453,
5	1,05	19,75	5	15,85	1175,5	0,88	0,02	1433,
7	0,65	21,65	7	17,38	1027,1	1,09	0,03	1434,
10	-0,67	28,77	10	23,14	474,5	1,32	0,05	1438,
15	-1,28	30,71	15	24,71	324,5	1,51	0,08	1438,
20	-1,54	31,05	20	24,99	297,7	1,66	0,10	1437,
30	-1,59	31,87	30	25,66	234,3	1,92	0,17	1438,
50	-1,53	32,42	50	26,10	191,9	2,34	0,34	1439,

REFERENCE NO, 75-3- 46 STN- BS41 DATE 20/ 8/75 GMT 18,1
POSITION 70-18,7N, 136-38,2W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,65	16,29	0	13,01	1451,1	0,0	0,0	1441,
1	3,65	16,29	1	13,01	1451,3	0,15	0,00	1441,
3	3,39	16,66	3	13,32	1421,6	0,43	0,01	1440,
5	0,93	23,17	5	18,59	910,4	0,66	0,02	1437,
7	0,10	26,19	7	21,04	675,1	0,82	0,03	1438,
10	-0,66	28,92	10	23,26	462,8	0,98	0,04	1437,
15	-1,31	30,48	15	24,53	341,6	1,19	0,06	1437,
20	-1,01	30,93	20	24,89	307,5	1,35	0,09	1439,
30	-1,46	31,40	30	25,27	270,7	1,63	0,17	1438,
50	-1,47	32,31	50	26,02	199,9	2,09	0,35	1440,

REFERENCE NO. 75-3- 47 STN- BS42 DATE 20/ 8/75 GMT 23.7
POSITION 70- 0.6N, 136-33.4W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.96	13.74	0	10.69	1677.8	0.0	0.0	1456.
1	7.96	13.74	1	10.69	1678.0	0.17	0.00	1456.
3	7.63	13.79	3	10.76	1671.0	0.50	0.01	1454.
5	7.06	13.92	5	10.91	1656.6	0.84	0.02	1452.
7	2.20	16.12	7	12.93	1459.6	1.15	0.04	1434.
10	0.39	23.88	10	19.18	854.2	1.48	0.07	1436.
15	-1.30	30.65	15	24.67	328.4	1.75	0.10	1437.
20	-1.43	31.77	20	25.58	241.8	1.88	0.12	1438.

REFERENCE NO. 75-3- 48 STN- BS43 DATE 21/ 8/75 GMT 4.3
POSITION 69-43.8N, 136-36.0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	8.61	12.73	0	9.84	1761.7	0.0	0.0	1457.
1	8.61	12.73	1	9.84	1761.9	0.18	0.00	1457.
3	7.78	13.11	3	10.21	1724.8	0.52	0.01	1454.
5	7.44	13.47	5	10.53	1693.8	0.87	0.02	1453.
7	6.34	13.97	7	11.01	1647.0	1.20	0.04	1449.
10	4.04	17.01	10	13.56	1398.1	1.66	0.08	1443.

REFERENCE NO. 75-3- 49 STN- BS44 DATE 21/ 8/75 GMT 8.3
POSITION 69-38.0N, 137-19.2W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2.18	14.69	0	11.79	1570.9	0.0	0.0	1432.
1	2.18	14.69	1	11.79	1571.1	0.16	0.00	1432.
3	2.13	14.83	3	11.90	1559.6	0.47	0.01	1432.
5	1.78	15.62	5	12.54	1497.7	0.78	0.02	1431.
7	1.21	18.10	7	14.53	1303.5	1.06	0.04	1432.
10	0.19	25.64	10	20.59	718.2	1.37	0.06	1437.
15	-1.28	30.38	15	24.44	349.6	1.60	0.09	1437.
20	-1.49	31.36	20	25.24	273.5	1.75	0.12	1438.
30	-1.54	31.70	30	25.52	247.0	2.01	0.18	1438.

REFERENCE NO. 75-3- 50 STN- BS45 DATE 21/ 8/75 GMT 14.4
POSITION 69-44.8N, 138- 7.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	0.33	14.55	0	11.69	1580.4	0.0	0.0	1423.
1	0.33	14.55	1	11.69	1580.6	0.16	0.00	1423.
3	-0.63	21.14	3	16.98	1066.1	0.42	0.01	1427.
5	-0.96	24.62	5	19.79	795.3	0.60	0.01	1431.
7	-1.01	25.40	7	20.42	734.7	0.76	0.02	1431.
10	-1.05	27.06	10	21.76	605.6	0.96	0.04	1434.
15	-1.11	29.70	15	23.89	402.2	1.21	0.07	1437.
20	-1.24	30.41	20	24.47	347.4	1.39	0.10	1437.
30	-1.56	30.88	30	24.85	310.5	1.72	0.19	1437.
50	-1.56	32.04	50	25.80	220.5	2.25	0.40	1439.
75	-1.49	32.29	75	25.99	201.9	2.77	0.73	1440.
100	-1.39	32.49	99	26.16	186.0	3.25	1.16	1441.
125	-1.39	32.81	124	26.41	161.5	3.69	1.66	1442.

REFERENCE NO, 75-3- 51 STN- BS46 DATE 21/ 8/75 GMT 20,3
POSITION 69-25,0N, 138- 4,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	2,65	14,47	0	11,60	1588,8	0,0	0,0	1434,
1	2,65	14,47	1	11,60	1588,9	0,16	0,00	1434,
3	2,32	14,71	3	11,80	1569,3	0,48	0,01	1433,
5	2,81	15,03	5	12,04	1546,0	0,79	0,02	1435,
7	2,05	16,38	7	13,14	1438,9	1,09	0,04	1434,
10	-0,21	26,11	10	20,98	680,5	1,39	0,06	1436,
15	-1,19	29,92	15	24,08	384,7	1,63	0,09	1437,
20	-1,47	30,75	20	24,75	320,3	1,80	0,12	1437,
30	-1,51	31,16	30	25,08	289,2	2,11	0,20	1437,
50	-1,55	32,03	50	25,79	221,4	2,61	0,41	1439,

REFERENCE NO, 75-3- 52 STN- BS47 DATE 22/ 8/75 GMT 0,3
POSITION 69-13,5N, 137-55,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	3,88	14,63	0	11,68	1580,9	0,0	0,0	1439,
1	3,88	14,63	1	11,68	1581,1	0,16	0,00	1439,
3	3,23	14,87	3	11,90	1560,2	0,47	0,01	1437,
5	2,86	15,19	5	12,17	1533,9	0,78	0,02	1436,
7	3,31	16,08	7	12,86	1466,6	1,08	0,04	1439,
10	1,46	19,90	10	15,97	1164,3	1,49	0,07	1436,
15	-0,10	28,83	15	23,16	471,8	1,89	0,12	1441,
20	-1,19	31,30	20	25,19	278,8	2,07	0,15	1439,

REFERENCE NO. 75-3- 53 STN- BS48 DATE 23/ 8/75 GMT 10.0
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.77	13.66	0	10.73	1673.8	0.0	0.0	1451.
1	6.77	13.66	1	10.73	1674.0	0.17	0.00	1451.
3	6.68	15.69	3	12.34	1517.2	0.50	0.01	1453.
5	5.74	22.33	5	17.63	1003.7	0.73	0.02	1457.
7	5.68	25.22	7	19.91	784.1	0.92	0.03	1461.
10	2.37	28.74	10	22.97	490.5	1.10	0.04	1452.
15	0.32	30.58	15	24.56	339.1	1.30	0.07	1445.
20	-1.07	31.47	20	25.32	266.3	1.45	0.09	1440.

REFERENCE NO. 75-3- 54 STN- BS48 DATE 23/ 8/75 GMT 11.2
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.97	13.58	0	10.65	1681.5	0.0	0.0	1451.
1	6.97	13.58	1	10.65	1681.7	0.17	0.00	1451.
3	6.99	13.57	3	10.65	1682.5	0.50	0.01	1452.
5	5.87	22.33	5	17.62	1004.9	0.76	0.02	1458.
7	5.49	25.48	7	20.13	762.6	0.94	0.03	1461.
10	2.43	28.56	10	22.82	504.9	1.12	0.04	1452.
15	0.37	30.74	15	24.68	327.3	1.32	0.07	1445.
20	-1.05	31.52	20	25.36	262.5	1.46	0.09	1440.

REFERENCE NO. 75-3- 55 STN- BS48 DATE 23/ 8/75 GMT 12.0
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.06	13.89	0	10.89	1658.4	0.0	0.0	1452.
1	7.06	13.89	1	10.89	1658.6	0.17	0.00	1452.
3	7.07	13.91	3	10.91	1657.0	0.50	0.01	1452.
5	5.80	22.43	5	17.70	996.4	0.75	0.02	1458.
7	5.65	25.24	7	19.93	782.1	0.93	0.03	1461.
10	2.39	28.85	10	23.06	482.1	1.12	0.04	1452.
15	0.33	30.88	15	24.80	316.1	1.30	0.07	1445.
20	-0.90	31.54	20	25.37	261.1	1.44	0.09	1441.

REFERENCE NO. 75-3- 56 STN- BS48 DATE 23/ 8/75 GMT 13.0
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.25	13.95	0	10.92	1655.7	0.0	0.0	1453.
1	7.25	13.95	1	10.92	1655.9	0.17	0.00	1453.
3	7.17	16.87	3	13.22	1431.6	0.49	0.01	1456.
5	5.69	23.14	5	18.27	941.5	0.71	0.02	1458.
7	4.76	25.08	7	19.88	786.4	0.89	0.03	1457.
10	2.45	28.73	10	22.96	491.5	1.07	0.04	1452.
15	0.35	30.83	15	24.75	320.4	1.26	0.07	1445.
20	-0.80	31.47	20	25.32	266.6	1.40	0.09	1441.

REFERENCE NO. 75-3- 57 STN- BS48 DATE 23/ 8/75 GMT 14.2
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.30	13.98	0	10.94	1653.7	0.0	0.0	1453.
1	7.30	13.98	1	10.94	1653.9	0.17	0.00	1453.
3	7.30	14.03	3	10.98	1649.8	0.50	0.01	1453.
5	5.79	22.03	5	17.39	1026.4	0.75	0.02	1457.
7	5.31	25.14	7	19.88	786.4	0.93	0.03	1459.
10	2.05	28.47	10	22.78	508.8	1.12	0.04	1450.
15	0.53	30.68	15	24.63	332.3	1.31	0.07	1446.
20	-0.87	31.51	20	25.35	263.6	1.45	0.09	1441.

REFERENCE NO. 75-3- 58 STN- BS48 DATE 23/ 8/75 GMT 15.2
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.33	13.89	0	10.86	1660.9	0.0	0.0	1453.
1	7.33	13.89	1	10.86	1661.1	0.17	0.00	1453.
3	7.31	15.62	3	12.23	1528.1	0.50	0.01	1455.
5	5.76	22.25	5	17.57	1009.4	0.74	0.02	1457.
7	5.73	24.68	7	19.48	825.0	0.92	0.03	1461.
10	2.16	28.60	10	22.87	499.6	1.12	0.04	1450.
15	0.39	30.86	15	24.78	318.3	1.31	0.07	1446.
20	-0.96	31.64	20	25.46	253.3	1.44	0.09	1440.

REFERENCE NO, 75-3- 59 STN- BS48 DATE 23/ 8/75 GMT 16,1
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,31	13,84	0	10,83	1664,2	0,0	0,0	1453,
1	7,31	13,84	1	10,83	1664,4	0,17	0,00	1453,
3	7,31	13,87	3	10,85	1662,4	0,50	0,01	1453,
5	5,68	22,16	5	17,50	1015,6	0,75	0,02	1457,
7	5,57	24,74	7	19,54	819,1	0,93	0,03	1460,
10	2,68	28,20	10	22,52	533,3	1,12	0,05	1452,
15	0,53	30,78	15	24,71	324,4	1,32	0,07	1446,
20	-0,95	31,63	20	25,45	254,1	1,46	0,09	1441,

REFERENCE NO, 75-3- 60 STN- BS48 DATE 23/ 8/75 GMT 17,2
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,27	13,88	0	10,87	1660,6	0,0	0,0	1453,
1	7,27	13,88	1	10,87	1660,8	0,17	0,00	1453,
3	7,12	14,45	3	11,32	1616,1	0,50	0,01	1453,
5	5,52	22,56	5	17,83	984,1	0,74	0,02	1457,
7	5,49	25,18	7	19,90	784,9	0,92	0,03	1460,
10	2,41	28,18	10	22,52	533,0	1,11	0,04	1451,
15	0,53	30,68	15	24,63	332,3	1,31	0,07	1446,
20	-1,04	31,58	20	25,41	257,7	1,45	0,09	1440,

REFERENCE NO. 75-3- 61 STN- BS48 DATE 23/ 8/75 GMT 18.5
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.19	14.02	0	10.98	1649.3	0.0	0.0	1453.
1	7.19	14.02	1	10.98	1649.5	0.16	0.00	1453.
3	6.61	17.15	3	13.48	1405.5	0.48	0.01	1454.
5	5.35	22.47	5	17.77	989.5	0.70	0.02	1456.
7	5.44	24.63	7	19.47	826.2	0.89	0.03	1459.
10	2.39	28.30	10	22.62	524.2	1.08	0.04	1451.
15	0.13	30.98	15	24.89	307.8	1.27	0.07	1445.
20	-1.02	31.52	20	25.36	262.2	1.41	0.09	1440.

REFERENCE NO. 75-3- 62 STN- BS48 DATE 23/ 8/75 GMT 19.1
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.17	13.98	0	10.95	1652.5	0.0	0.0	1453.
1	7.17	13.98	1	10.95	1652.7	0.17	0.00	1453.
3	6.55	17.40	3	13.69	1385.9	0.49	0.01	1455.
5	5.61	22.50	5	17.77	989.5	0.71	0.02	1457.
7	5.49	24.89	7	19.67	807.2	0.89	0.03	1460.
10	2.29	28.42	10	22.72	514.3	1.07	0.04	1451.
15	-0.02	31.20	15	25.07	290.1	1.25	0.07	1444.
20	-1.08	31.55	20	25.39	260.0	1.38	0.09	1440.

REFERENCE NO, 75-3- 63   STN- BS48   DATE 23/ 8/75   GMT 19,9
POSITION 70-10,0N, 133-25,0W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,06	13,70	0	10,74	1672,7	0,0	0,0	1452,
1	7,06	13,70	1	10,74	1672,9	0,17	0,00	1452,
3	7,08	13,69	3	10,74	1673,7	0,50	0,01	1452,
5	5,70	20,14	5	15,91	1169,7	0,81	0,02	1455,
7	5,66	23,07	7	18,22	946,3	1,02	0,03	1458,
10	4,75	27,74	10	21,99	584,6	1,25	0,05	1460,
15	0,56	30,65	15	24,60	334,6	1,46	0,08	1446,
20	-1,05	31,77	20	25,57	243,0	1,60	0,10	1440,

REFERENCE NO, 75-3- 64   STN- BS48   DATE 23/ 8/75   GMT 21,1
POSITION 70-10,0N, 133-25,0W   DEPTH

WIND DIR-   WAVE P/H   AIR TEMP   WW
WIND SPD-   SWELL P/H   WET BLB   CLD-A
SWELL D   BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,30	14,22	0	11,13	1635,4	0,0	0,0	1454,
1	7,30	14,22	1	11,13	1635,6	0,16	0,00	1454,
3	6,72	17,09	3	13,43	1410,6	0,48	0,01	1455,
5	4,10	22,57	5	17,96	971,8	0,71	0,02	1451,
7	5,01	24,65	7	19,53	820,8	0,89	0,03	1457,
10	3,11	28,40	10	22,65	521,2	1,09	0,04	1454,
15	0,10	30,90	15	24,83	313,3	1,28	0,07	1444,
20	-1,07	31,61	20	25,44	255,2	1,42	0,09	1440,

REFERENCE NO, 75-3- 65 STN- BS48 DATE 23/ 8/75 GMT 22,9
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,79	13,95	0	10,96	1651,9	0,0	0,0	1451,
1	6,79	13,95	1	10,96	1652,1	0,17	0,00	1451,
3	4,78	20,97	3	16,64	1099,5	0,46	0,01	1452,
5	4,06	23,75	5	18,89	881,6	0,66	0,01	1452,
7	5,93	26,73	7	21,07	672,7	0,82	0,02	1464,
10	1,80	29,46	10	23,58	432,1	0,98	0,04	1450,
15	0,15	30,75	15	24,70	325,4	1,17	0,06	1444,
20	-1,12	31,52	20	25,36	262,2	1,31	0,09	1440,

REFERENCE NO, 75-3- 66 STN- BS48 DATE 24/ 8/75 GMT 0,0
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,16	14,62	0	11,45	1603,2	0,0	0,0	1454,
1	7,16	14,62	1	11,45	1603,4	0,16	0,00	1454,
3	6,01	16,20	3	12,79	1473,1	0,48	0,01	1451,
5	4,01	23,79	5	18,93	878,5	0,69	0,02	1452,
7	5,32	25,22	7	19,95	780,4	0,86	0,03	1460,
10	2,40	28,84	10	23,05	482,9	1,04	0,04	1452,
15	0,38	30,83	15	24,76	320,1	1,22	0,06	1445,
20	-1,08	31,66	20	25,47	251,6	1,36	0,09	1440,

REFERENCE NO, 75-3- 67 STN- BS48 DATE 24/ 8/75 GMT 0.9
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.16	14.89	0	11.66	1582.8	0.0	0.0	1454.
1	7.16	14.89	1	11.66	1583.0	0.16	0.00	1454.
3	7.15	14.95	3	11.71	1578.5	0.47	0.01	1454.
5	4.12	22.83	5	18.16	952.3	0.71	0.02	1451.
7	5.17	25.07	7	19.84	790.7	0.88	0.03	1459.
10	2.47	28.65	10	22.89	498.0	1.07	0.04	1452.
15	0.17	30.94	15	24.85	311.0	1.26	0.07	1445.
20	-1.09	31.63	20	25.45	253.6	1.39	0.09	1440.

REFERENCE NO, 75-3- 68 STN- BS48 DATE 24/ 8/75 GMT 2.1
POSITION 70-10.0N, 133-25.0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7.11	14.91	0	11.69	1580.7	0.0	0.0	1454.
1	7.11	14.91	1	11.69	1580.9	0.16	0.00	1454.
3	7.12	14.91	3	11.68	1581.4	0.47	0.01	1454.
5	4.15	22.51	5	17.90	977.0	0.74	0.02	1451.
7	5.22	25.21	7	19.94	780.5	0.91	0.03	1459.
10	2.44	28.61	10	22.86	500.6	1.10	0.04	1452.
15	0.26	30.85	15	24.77	318.3	1.29	0.07	1445.
20	-1.09	31.60	20	25.42	256.4	1.43	0.09	1440.

REFERENCE NO, 75-3- 69 STN- BS48 DATE 24/ 8/75 GMT 3,0
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,16	15,13	0	11,85	1564,4	0,0	0,0	1454,
1	7,16	15,13	1	11,85	1564,6	0,16	0,00	1454,
3	7,16	15,13	3	11,85	1564,6	0,47	0,01	1454,
5	4,30	22,83	5	18,14	953,8	0,72	0,02	1452,
7	5,63	25,70	7	20,29	747,5	0,89	0,03	1461,
10	2,46	28,43	10	22,72	514,5	1,08	0,04	1452,
15	-0,05	31,16	15	25,04	293,0	1,26	0,07	1444,
20	-1,11	31,69	20	25,50	249,1	1,38	0,09	1440,

REFERENCE NO, 75-3- 70 STN- BS48 DATE 24/ 8/75 GMT 4,2
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,12	15,09	0	11,83	1566,8	0,0	0,0	1454,
1	7,12	15,09	1	11,83	1567,0	0,16	0,00	1454,
3	7,10	15,13	3	11,86	1564,2	0,47	0,01	1454,
5	3,73	23,14	5	18,43	926,3	0,69	0,02	1450,
7	5,86	25,75	7	20,31	745,3	0,86	0,03	1462,
10	2,41	28,70	10	22,94	493,5	1,04	0,04	1452,
15	-0,22	31,27	15	25,13	284,5	1,22	0,06	1443,
20	-1,09	31,60	20	25,42	256,4	1,36	0,09	1440,

REFERENCE NO, 75-3- 71 STN- BS48 DATE 24/ 8/75 GMT 5,3
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,08	15,03	0	11,78	1571,2	0,0	0,0	1454,
1	7,08	15,03	1	11,78	1571,4	0,16	0,00	1454,
3	7,08	15,08	3	11,82	1567,4	0,47	0,01	1454,
5	4,24	22,60	5	17,97	970,9	0,72	0,02	1451,
7	4,78	24,61	7	19,51	821,8	0,90	0,03	1456,
10	2,57	28,72	10	22,94	493,2	1,10	0,04	1452,
15	-0,22	31,27	15	25,13	284,5	1,29	0,07	1443,
20	-1,08	31,66	20	25,47	251,6	1,42	0,09	1440,

REFERENCE NO, 75-3- 72 STN- BS48 DATE 24/ 8/75 GMT 6,4
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	7,02	15,08	0	11,83	1566,7	0,0	0,0	1454,
1	7,02	15,08	1	11,83	1566,9	0,16	0,00	1454,
3	6,56	18,33	3	14,42	1314,8	0,46	0,01	1456,
5	5,98	21,88	5	17,26	1039,7	0,68	0,02	1458,
7	5,87	23,33	7	18,41	928,5	0,87	0,03	1459,
10	2,63	28,86	10	23,05	482,9	1,08	0,05	1453,
15	-0,08	31,30	15	25,15	282,5	1,27	0,07	1444,
20	-1,07	31,65	20	25,47	252,5	1,39	0,09	1440,

REFERENCE NO, 75-3- 73 STN- BS48 DATE 24/ 8/75 GMT 7,2
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,78	15,87	0	12,46	1504,8	0,0	0,0	1454,
1	6,78	15,87	1	12,46	1505,0	0,15	0,00	1454,
3	6,49	18,87	3	14,84	1273,3	0,43	0,01	1456,
5	5,84	21,97	5	17,34	1031,6	0,65	0,02	1457,
7	4,42	25,34	7	20,12	764,0	0,84	0,03	1456,
10	2,34	28,77	10	22,99	488,3	1,03	0,04	1451,
15	-0,14	30,83	15	24,78	318,1	1,21	0,07	1443,
20	-0,98	31,33	20	25,21	276,7	1,36	0,09	1440,

REFERENCE NO, 75-3- 74 STN- BS48 DATE 24/ 8/75 GMT 8,2
POSITION 70-10,0N, 133-25,0W DEPTH

WIND DIR- WAVE P/H AIR TEMP WW
WIND SPD- SWELL P/H WET BLB CLD-A
SWELL D BARO

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6,67	15,73	0	12,36	1514,4	0,0	0,0	1453,
1	6,67	15,73	1	12,36	1514,7	0,15	0,00	1453,
3	6,07	21,37	3	16,84	1079,5	0,40	0,01	1458,
5	5,63	22,92	5	18,10	957,6	0,60	0,01	1458,
7	1,82	26,45	7	21,17	662,4	0,76	0,02	1446,
10	2,23	29,55	10	23,63	427,7	0,94	0,04	1452,
15	-0,45	31,75	15	25,53	246,3	1,09	0,06	1443,
20	-1,03	32,04	20	25,78	222,3	1,20	0,08	1441,

REFERENCE NO. 75-3- 75   STN- BS48   DATE 24/ 8/75   GMT 9.2
POSITION 70-10.0N, 133-25.0W   DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.70	16.34	0	12.84	1467.9	0.0	0.0	1454.
1	6.70	16.34	1	12.84	1468.2	0.15	0.00	1454.
3	5.86	21.27	3	16.79	1084.9	0.39	0.01	1457.
5	5.38	23.12	5	18.29	940.2	0.59	0.01	1457.
7	2.95	25.43	7	20.30	746.3	0.76	0.02	1450.
10	3.27	28.17	10	22.45	540.2	0.96	0.04	1455.
15	-0.49	31.37	15	25.22	275.8	1.13	0.06	1442.
20	-1.02	31.81	20	25.60	239.9	1.26	0.09	1440.

REFERENCE NO. 75-3- 76   STN- BS48   DATE 24/ 8/75   GMT 10.1
POSITION 70-10.0N, 133-25.0W   DEPTH

WIND DIR-	WAVE P/H	AIR TEMP	WW
WIND SPD-	SWELL P/H	WET BLB	CLD-A
	SWELL D	BARO	

PRESS	TEMP	SAL	DEPTH	SIGMA T	SVA	DELTA D	POT EN	SOUND VEL
0	6.94	15.55	0	12.20	1530.4	0.0	0.0	1454.
1	6.94	15.55	1	12.20	1530.6	0.15	0.00	1454.
3	5.58	20.90	3	16.52	1110.7	0.39	0.01	1455.
5	4.95	23.45	5	18.58	911.6	0.59	0.01	1456.
7	2.74	25.44	7	20.32	744.5	0.76	0.02	1449.
10	1.51	26.87	10	21.53	628.3	0.97	0.04	1445.
15	-0.43	31.16	15	25.05	291.6	1.17	0.07	1442.
20	-1.04	31.65	20	25.47	252.2	1.30	0.09	1440.

Pacific Marine Science Report 76-27

WATER MOVEMENTS IN THE BEAUFORT SEA

Summer 1974, Spring and Summer 1975

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Pacific Marine Science Report 76-27

WATER MOVEMENTS IN THE BEAUFORT SEA:
Summer 1974,
Spring and Summer 1975

by

R.H. Herlinveaux, B.R. de Lange Boom,
G.R. Wilton

Institute of Ocean Sciences, Patricia Bay
Victoria, B.C.

December 1976

This is a manuscript which has received only limited circulation. On citing this report in a bibliography, the title should be followed by the words "UNPUBLISHED MANUSCRIPT" which is in accordance with accepted bibliographic custom.

ABSTRACT

Water movements were observed using various methods during the summer of 1974, the spring of 1975, and the summer of 1975. The ship's position in the ice fields was observed using Decca. Water movements at depth were observed with a specially adapted current meter. Time series observations of water currents from the surface to the bottom of the water column are presented. Ice movements were observed by having radio beacons installed in ice floes. These were then tracked over a period of time using a helicopter.

TABLE OF CONTENTS

1. INTRODUCTION

The data presented in this report were collected as part of a program on baseline environmental studies known as the Beaufort Sea Project. The Technical Report containing a summary of the data and a description of the physical oceanography of the South Eastern Beaufort Sea are under a separate cover.

During the summer of 1974 and the spring and summer of 1975 salinity, temperature, turbidity and current profiles were obtained. Meteorological observations were also taken as well as the ship's drift and the ice drift. Wave data were also collected from a surface wave measuring bouy.

This report is the second of three data reports:

1.1 Salinity, temperature, turbidity and meteorological observation in the southern Beaufort Sea - summer 1974, spring and summer 1975.

1.2 Water movements at surface and at depth from anchored platforms and ice camps, recorded ship's drift, ice drift, and other current meter observations in the southern Beaufort Sea - summer 1974, spring and summer 1975.

1.3 Wave records in the southern Beaufort Sea - summer 1974 and 1975.

2. DATA COLLECTION

During the summer of 1974, oceanographic and meteorological observations were made at 63 stations in the south eastern Beaufort Sea (Figure 1). At four of these stations current data were obtained. A record was also kept of the ship's drift while ship drifted with the ice pack.

During the spring of 1975, similar observations were made at 41 locations (Figure 2) using a Bell 205 helicopter. Time series of current profiles were obtained at three ice stations in addition to surface currents at other locations. Ice drift measurements were carried out using radio beacons tracked with a helicopter.

In the summer of 1975, current profiles were obtained at one location (Figure 3), the CANMAR drill site. Temperature, salinity, turbidity and wave data are reported in other volumes in this series.

2.1 Observation Platform

During the summer of 1974 observations were carried out from the M.V. Theta, an ice strengthened charter vessel resembling a North Sea trawler. (Figure 4). Her length, breadth and draft are 50 m, 8.5 m and 4 m respectively. An 800 hp diesel and a directly-driven single variable pitch screw give her a cruising speed of just over 9 knots.

Following standard practice, observations were made from the starboard side. Current profiles were made from a small gallows located on the main deck near the forward corner of the deckhouse.

During the spring the various synoptic observations were carried out from the Bell 205 helicopter sitting on the ice (Figure 5). The CTD* casts were carried out with the recorder, winch and generator in the helicopter. The helicopter normally landed beside a lead, or a hole was drilled in the ice through which the equipment could be lowered. Through the lead or hole an electromagnetic probe was lowered to below the ice.

The time series were taken at an ice camp from inside a portable shelter (Figure 6). Four men occupied these ice camps taking hourly observations for 2-4 days.

At the first ice camp (Camp A) the ice was not shore fast while at the other camps, B and C, the ice was shore fast and about 1½ to 2 metres thick.

2.2 Current Measurements

The main current meter used in summer 1974, and spring 1975 was a Hydroproducts Model 460 speed and sensor and model 465A direction sensor (Figure 7). The meter direction sensor had been modified for use in Arctic water. In the summer of 1974, only a few profiles were obtained, since both leakage of the underwater hose termination and breakage of the electricalconductors occurred; however during the spring the meter assembly worked very well.

During the spring of 1975 a Cushing electromagnetic current meter was used but the cold temperatures (-35°C to - 40°C) appeared to damage the unit even though it was exposed to these temperatures for only short periods of time. Further trials are planned for this unit when it is repaired.

2.3 Ship Drift

Whenever the ship was stopped for any length of time the officer of the watch was requested to record the ship's position at regular intervals, as well as the ship's head, wind direction and speed. The ice cover, in tenths, was added to this list later in the cruise. The ship's drift was influenced not only by the winds and currents, but also by the ice- and at times by the ship's engine since it was not possible to hold a zero propellor pitch setting. Errors due to misreading of the Decca receiver may also have occurred. Despite such errors, the drift observations are considered useful. Photographs of the recorded ship's drift in the ice during summer 1974 are shown in Figures 8 to 12. Tables of drift are in the data section of this report.

2.4 Ice Drift During Spring

Radio beacon buoys (Figure 13) were set out on the ice pack north of Kugmallit Bay to a distance of 90 miles from Tuktoyaktuk (Figure 14). The buoys were located by using a directional antenna and receiver installed in a Bell 206 helicopter to home in on the beacon, whereupon the position was fixed by Decca. Fog limited the number of observations.

CTD - conductivity, temperature, depth.

The ice camp drift off Sachs Harbour (Figure 15) was determined by Decca fixes from the helicopter which positioned the ice camp at least daily.

3. DATA REDUCTION

The current data has been punched onto cards and the north-south and east-west components have been calculated. Both the current profiles and the components have been plotted.

Progressive vector plots at each depth were also constructed for the time series stations and are included in this report.

The ship's drift and the ice drift have been calculated and plotted. These plots are also included in this report.

PERSONNEL

Summer 1974 : Spring 1975

Data Collected by:

R.H. Herlinveaux
B.R. de Lange Boom
G.R. Wilton
A.R. Milne
B.D. Smiley

Summer 1975

CANMAR Barge

Data collected by G.R. Wilton

Data processed by:

B.R. de Lange Boom
G.R. Wilton
A. Weir

LIST OF FIGURES

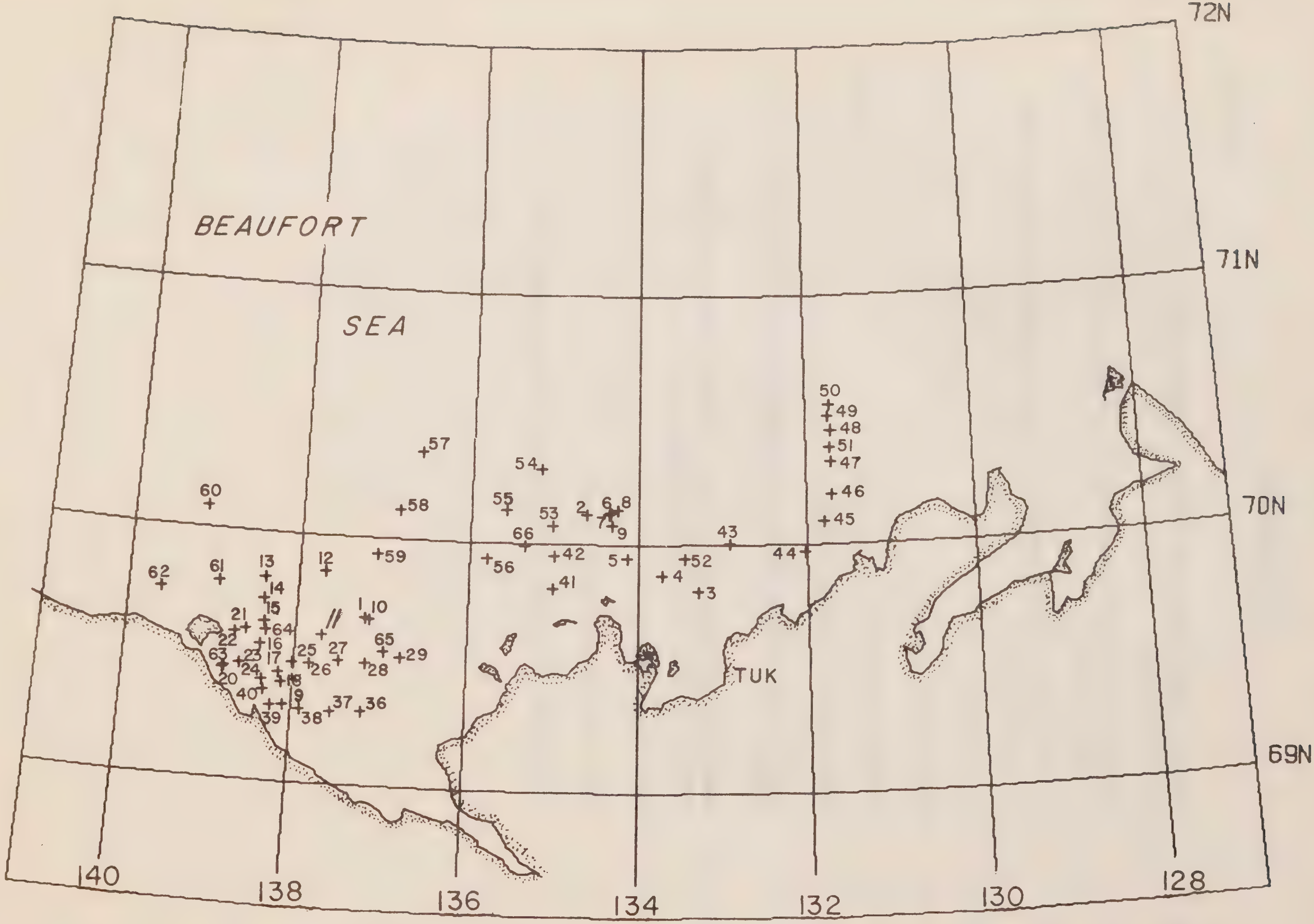


Figure 1. Oceanographic stations, 1974 summer (stations 30 to 35 were for bottom samples only and were not plotted).

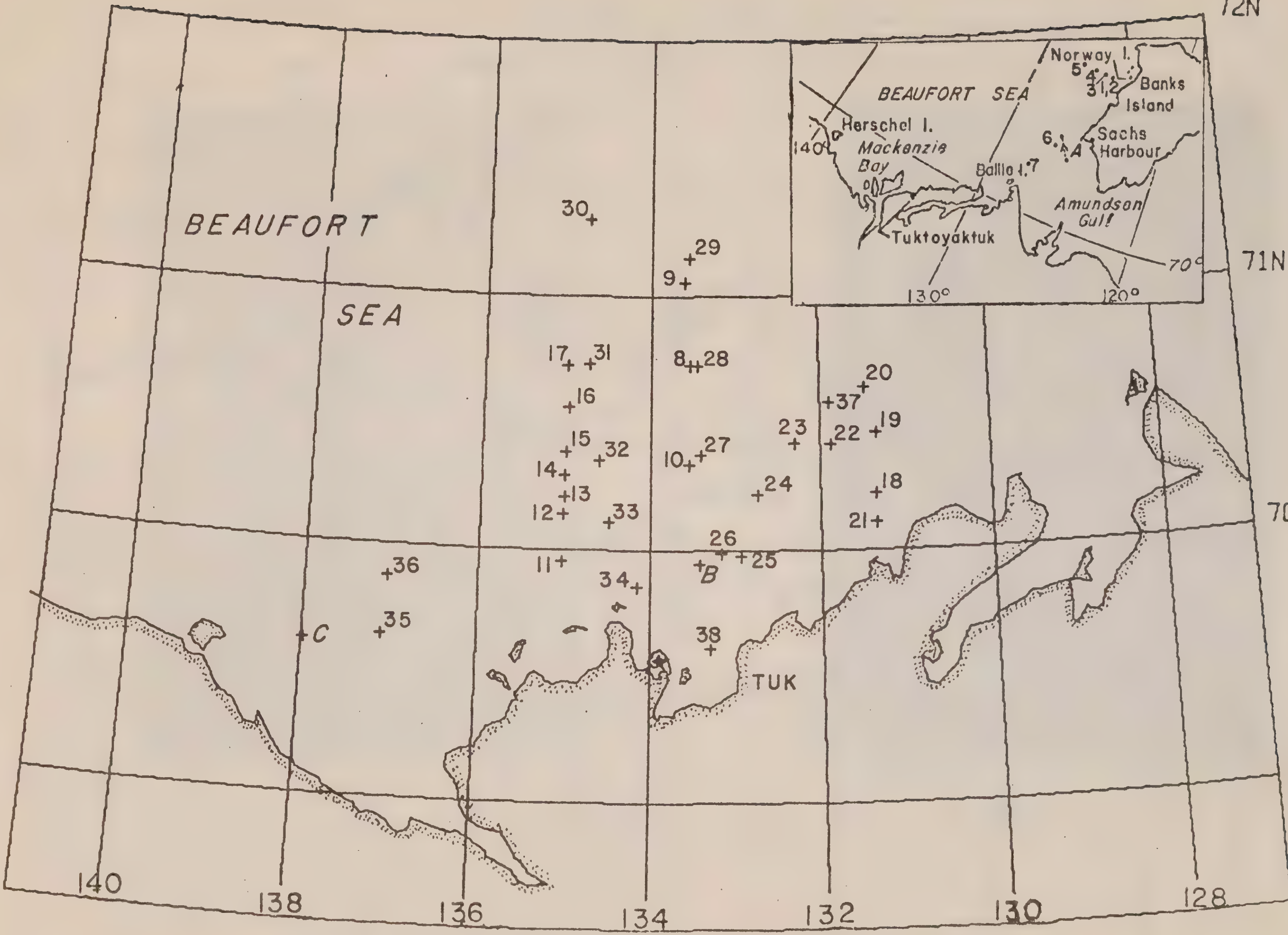


Figure 2. Oceanographic stations, 1975 spring with the ice camps indicated by letters.

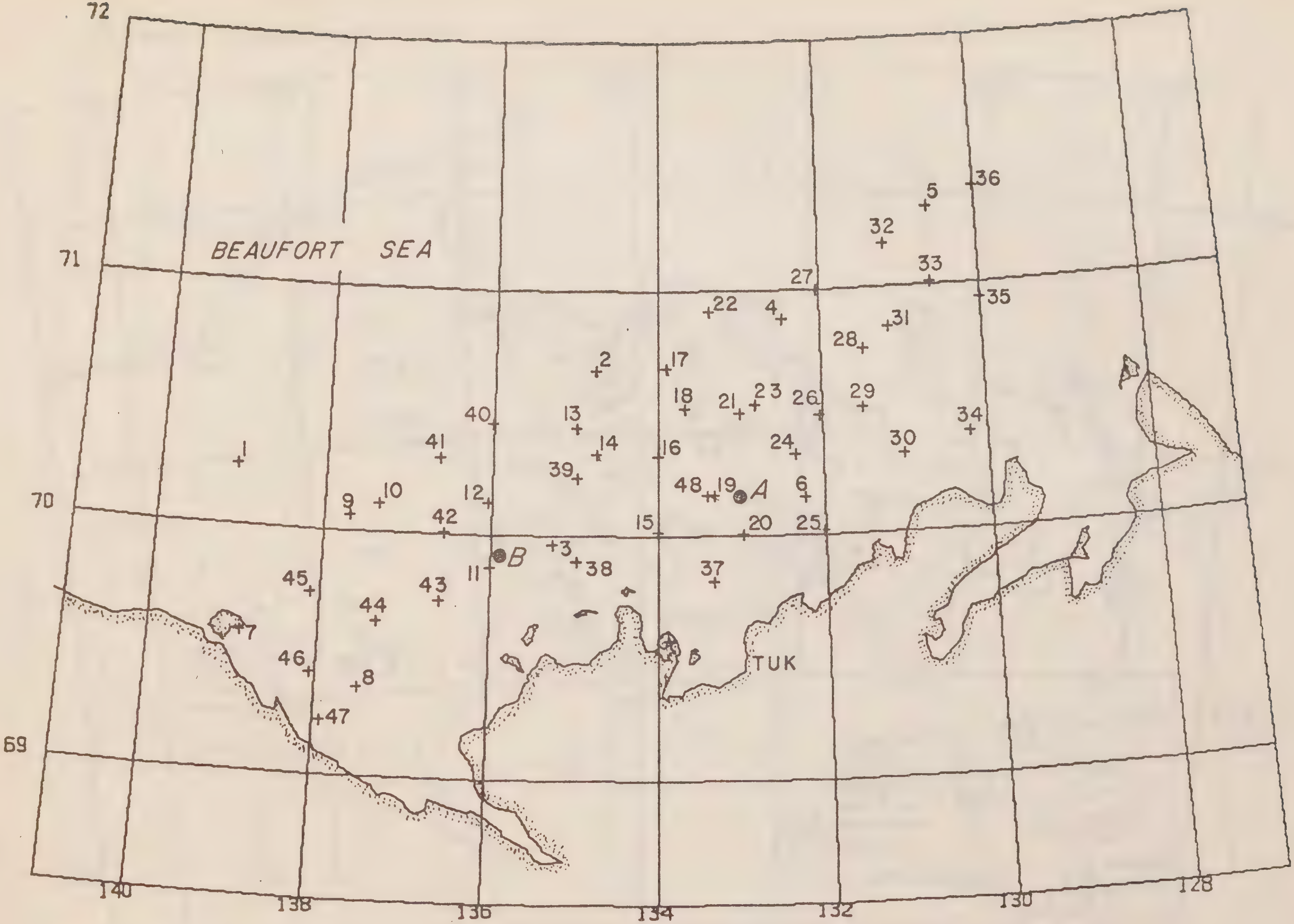


Figure 3. Oceanographic stations, 1975 summer (A indicates position of Canmar barge and B indicates position of wave buoy).

Figure 4   M.V. THETA

Figure 5   Bell 205 Helicopter

Figure 6 Portable Shelter

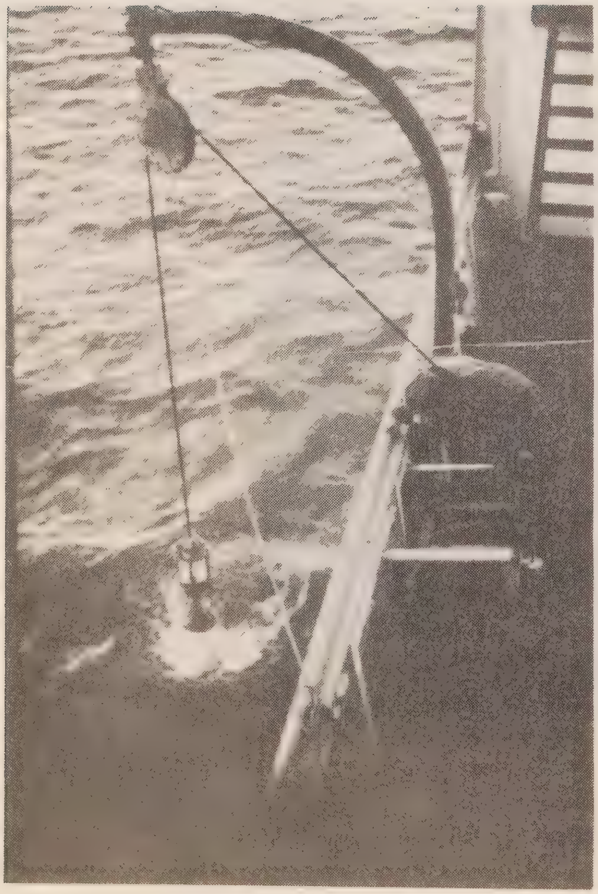


Figure 7 Hydroproducts current meter

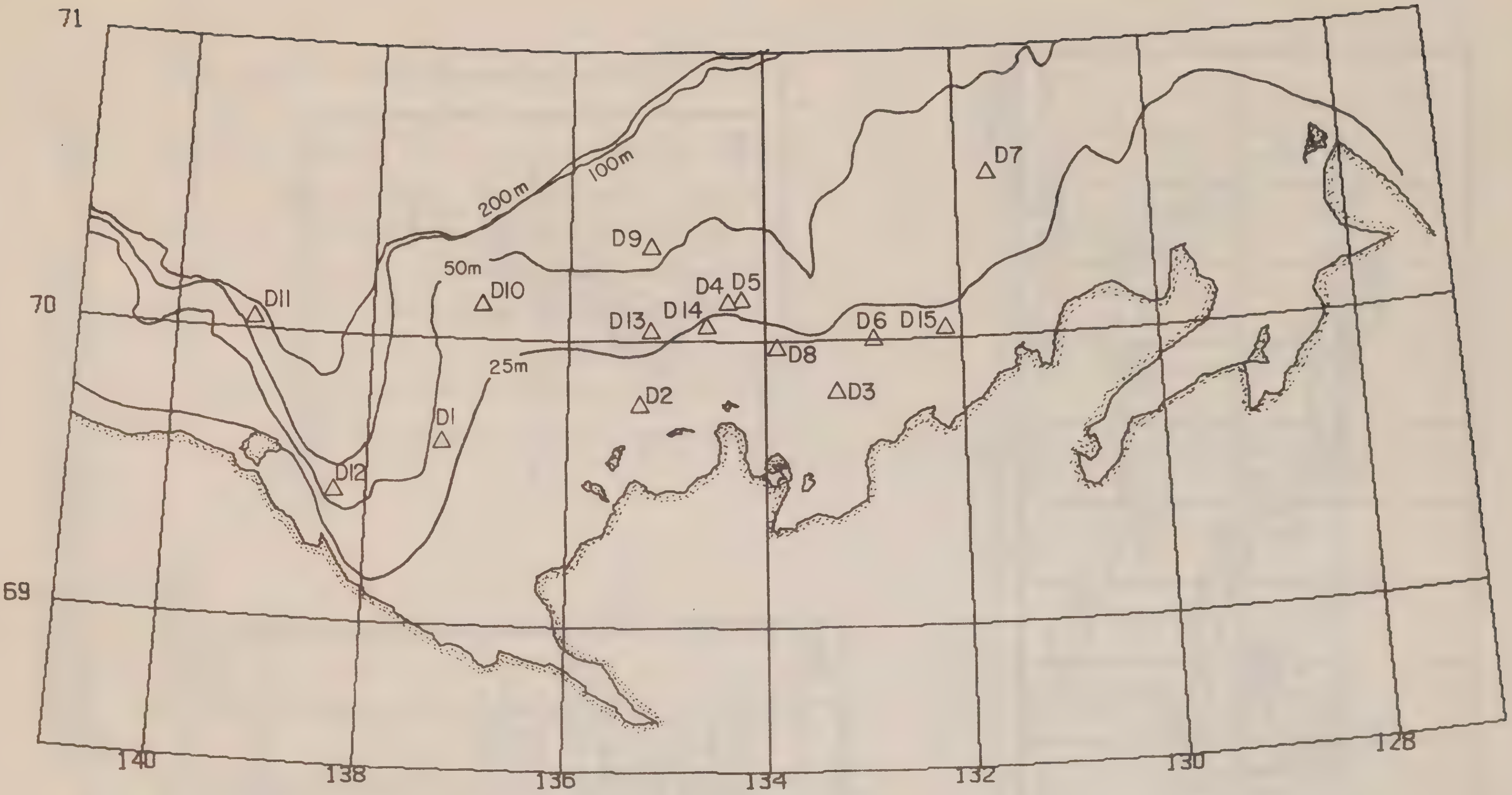


Figure 8 Beaufort Sea showing areas of ship's drift as plotted in Figures 9-12.

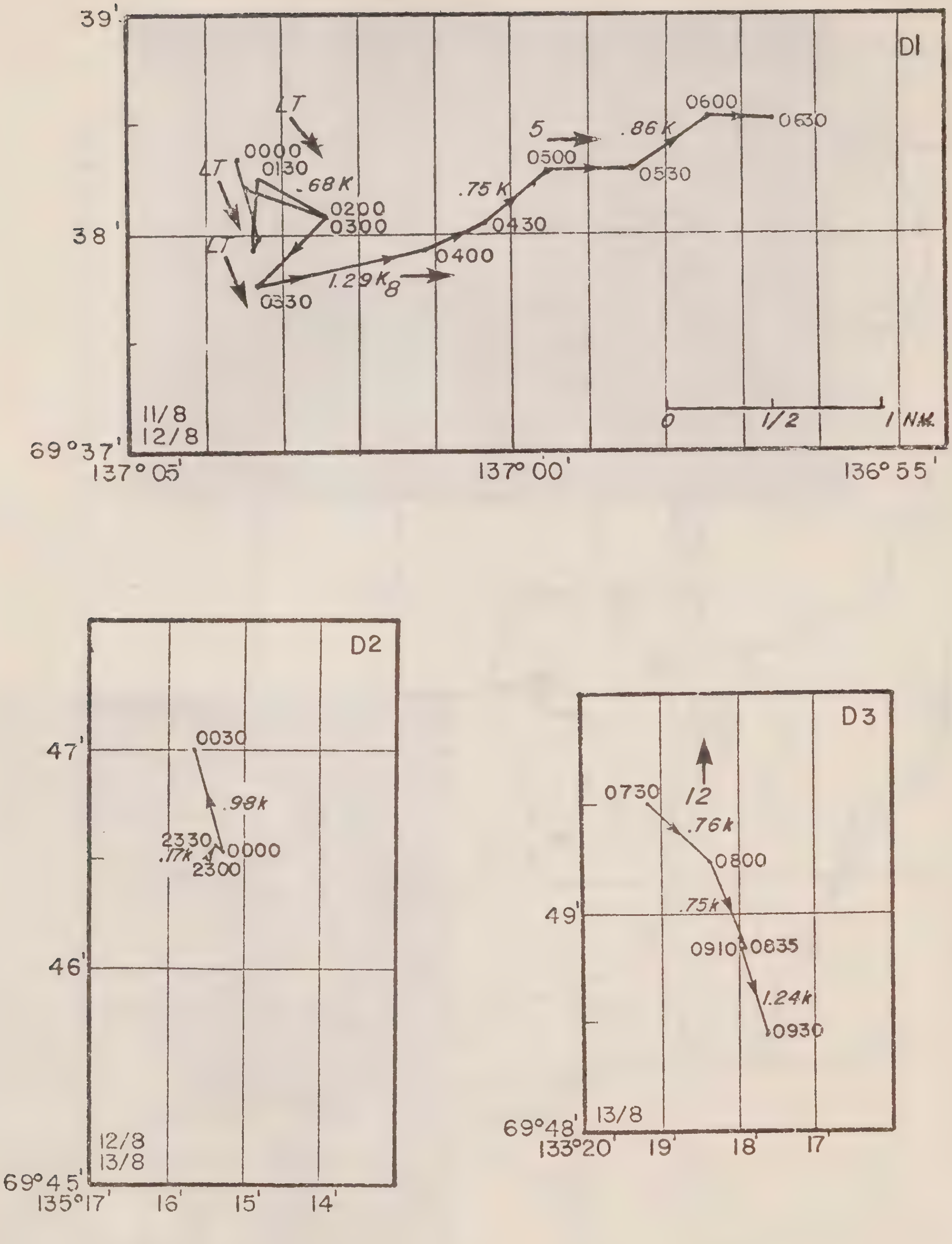


Figure 9   Recorded ship's drift in the ice during summer 1974 with arrows indicating wind direction.

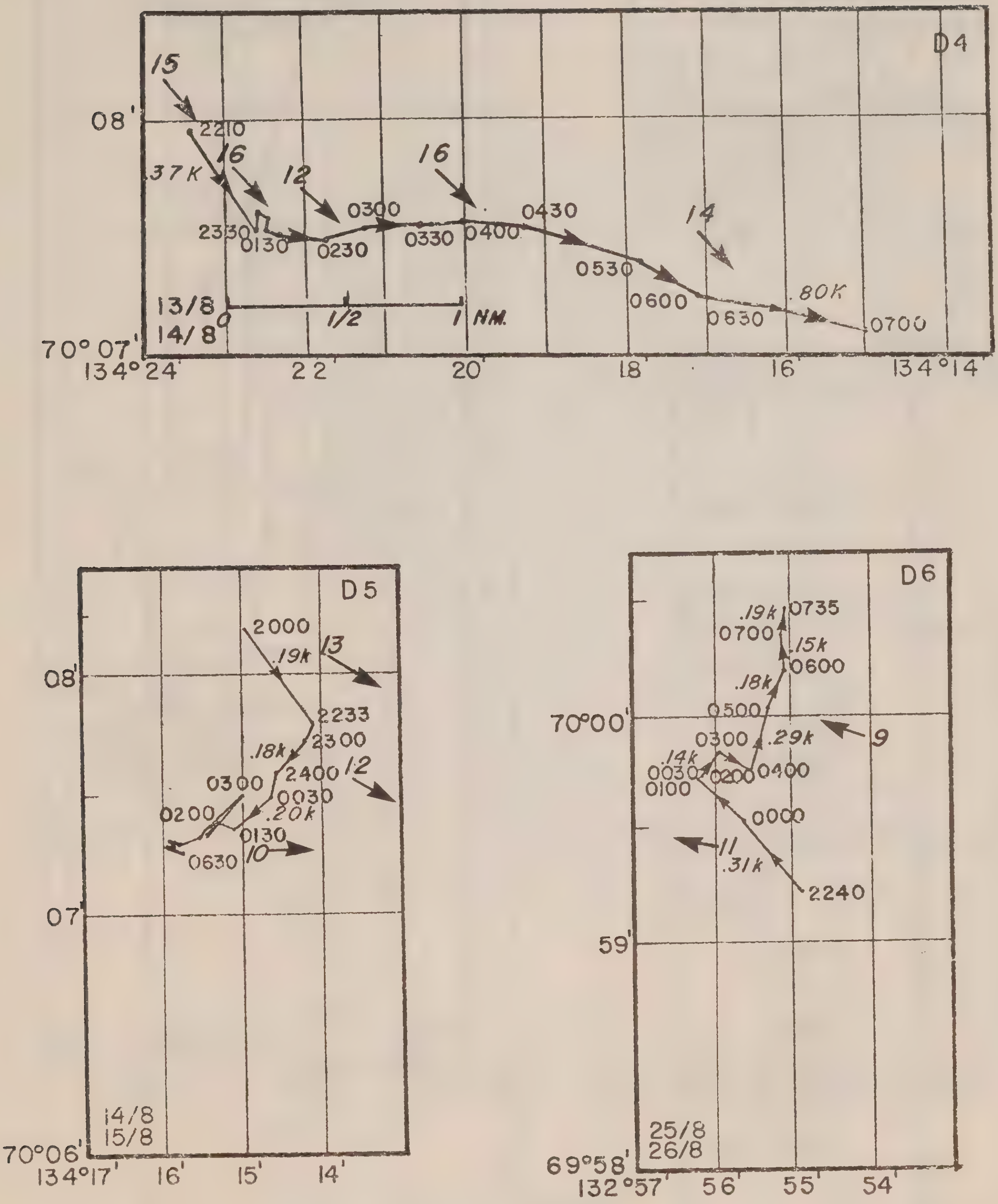
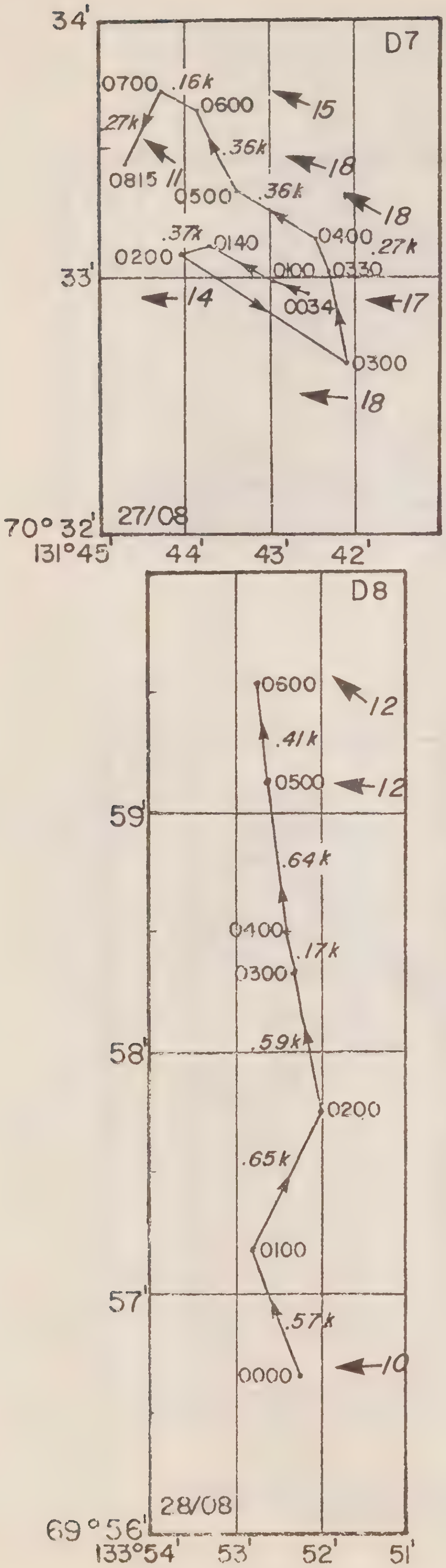


Figure 10   Recorded ship's drift in the ice during summer 1974 with arrows indicating wind direction.



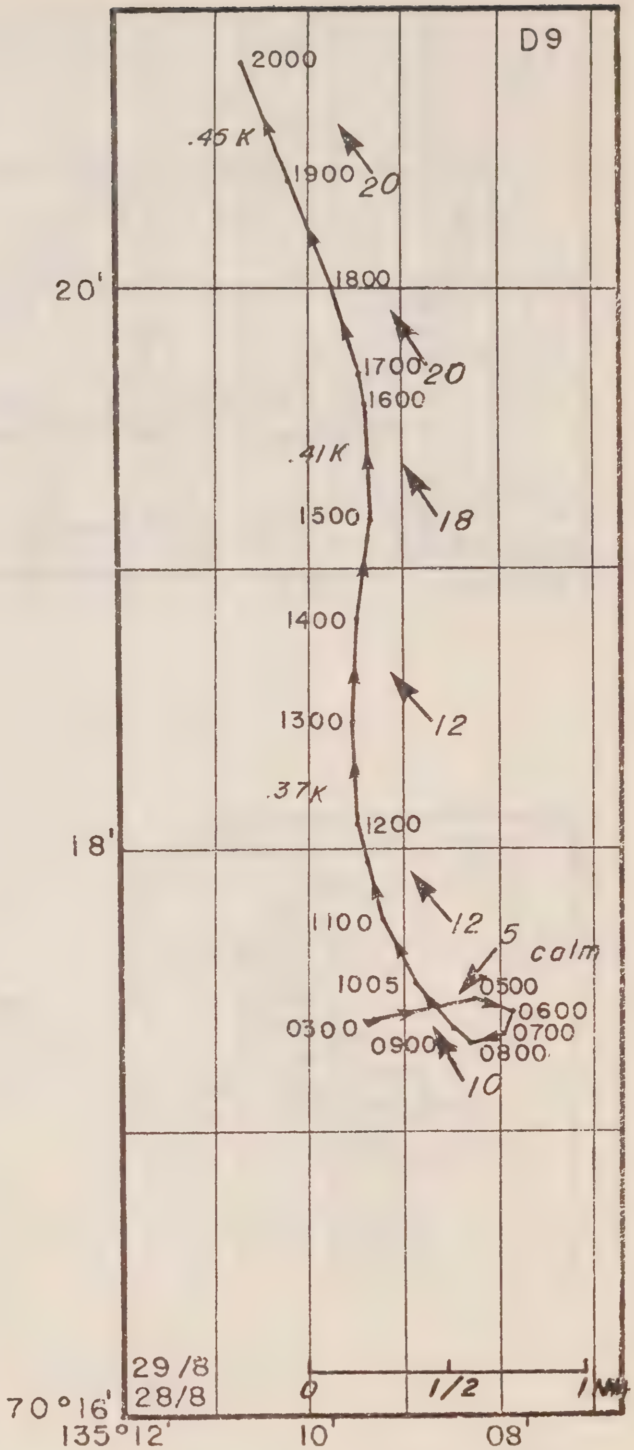


Figure 11 Recorded ship's drift in the ice during summer 1974 with arrows indicating wind direction.

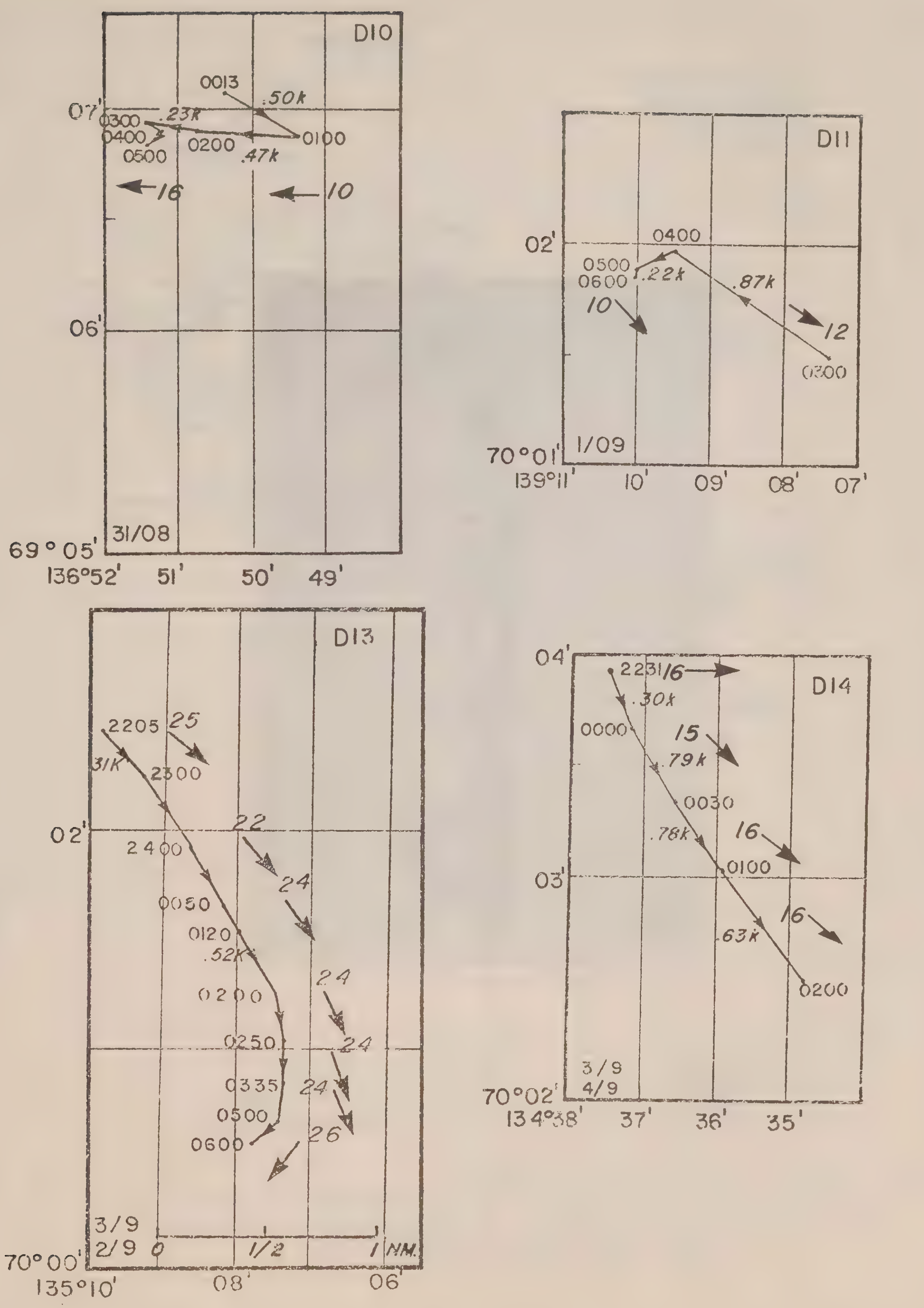


Figure 12 Recorded ship's drift in the ice during summer 1974 with arrows indicating wind direction.

Figure 13 Radio beacon buoy

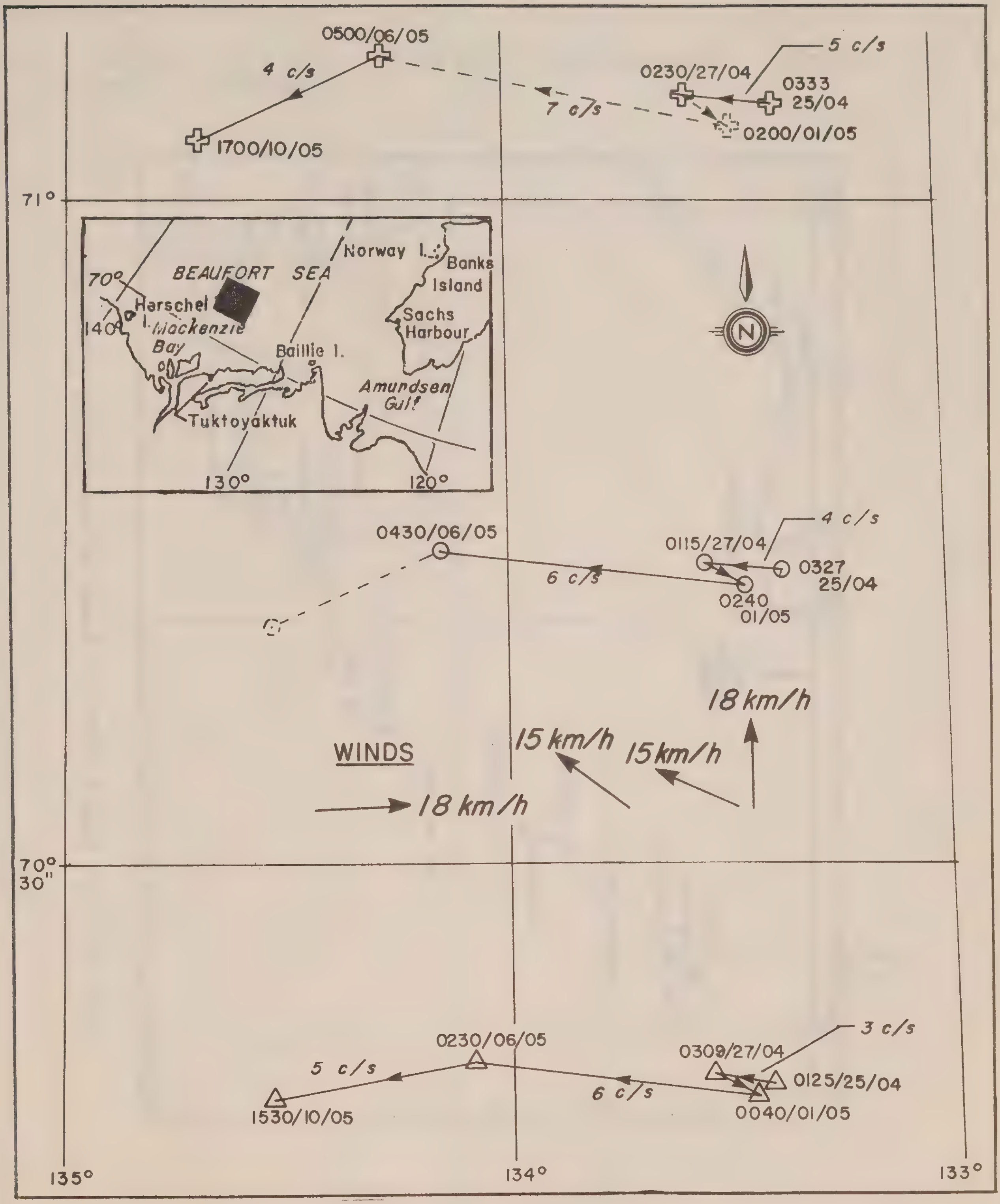


Figure 14 Movement of the ice during the spring of 1975 as tracked by radio beacon buoys.

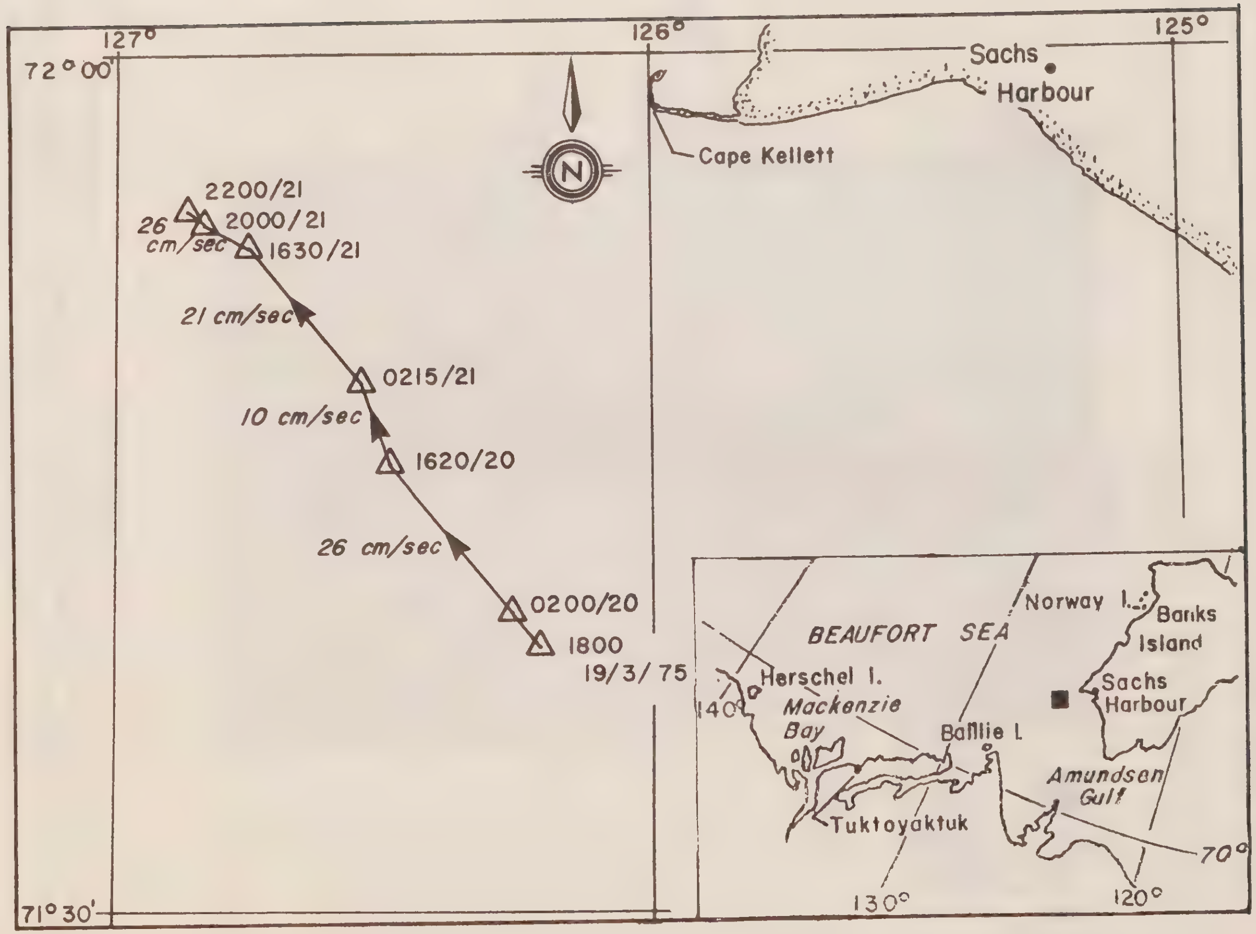


Figure 15 Ice Camp A drift off Sachs Harbour during spring 1975.

TABLE OF ALL OBSERVATIONS

SUMMER 74-1

Station	Bottle* Cast	In-situ* Salinometer	CTD/STD*	Transmissiometer*	Current
1			1		
2			1		
3			1		
4			1		
5		1	1		
6			1		
7		1	1		
8			1		
9			1		
10			1		
11			58		2 Profiles
12			1		
13			3		
14			2		
15			1		
16			2		
17			1		
18			1		
19			1		
20			1		
21			2		
22			1		
23			2		
24			1		
25			1	1	
26			1	1	
27			1	1	
28			1	1	
29			1	1	
36			1	1	
37			1	1	
38			1	1	
39			1	1	
40			3	3	6 surface
41			1	1	1 surface
42			1	1	
43			1	1	
44			1	1	
45			1	1	
46			1	1	
47			2	1	
48			1	1	
49			1	1	
50			1	1	
51			2	1	

* Under separate cover

Station	Bottle Cast	In-situ Salinometer	CTD/STD	Transmissiometer	Currents
SUMMER 74-1					
52			1		
53			1		
54			1	1	1 profile
55			2	1	
56			2	1	
57			2	1	
58			2	1	
59			1	1	
60			4	1	
61			1	1	
62			2	1	
63			1	1	
64			1		
65			1		
66			1		
SPRING 75-1					
1		2		1	2 near surface
2		1		1	1 " "
3		1		1	1 " "
4		1			1 " "
5		1			1 " "
A		12	2		36 surface
6		1			1 near surface
7		1			1 near surface
SPRING 75-2					
B	2	3	48	3	48 profiles
C	1	2	52	1	53 profiles
8		1			
9		1			
10		1			
11		1			
12		1			
13		1			
14		1			
15		1			
16		1			
17		1			
18		1			
19		1			
20		1			

Station	Bottle Cast	In-situ Salinometer	CTD/STD	Transmissiometer	Currents
SPRING 75-2					
21			1		
22			1		
23	1		1		
24	1		1		
25	1		1		
26	1		1	1	
27	1		1	1	
28			1	1	
29			1	1	
30	1		1	1	
31			1	1	
32			1	1	
33			1		
34			1		
35			1	1	
36			1	1	
37	1				
38				1	

SUMMER 75-3

Station	Bottle Cast	In-situ Salinometer	CTD/STD	Transmissiometer	Currents
Canmar Barge	2	14		10	9 profiles 21 surface

Near Surface Currents Beaufort Sea

Station	Date	Time (GMT)	Current Speed (cm/sec)	Current Direction(T)	Wind Direction(T)	Wind Speed (knots)
SUMMER 74						
40	24.8.74	0500	44	312		
		1425	48	314		
		1440	44	320		
		1530	28	292		
		1713	51	289	calm	
		1955	44	311	calm	
41	25.8.74	1455	13	300	120	10

SHIP'S DRIFT SUMMER 1974

DATE	TIME (GMT)	LATITUDE	LONGITUDE	WIND (mph) (^{o}T)		
12-08-74	0600	69 38.4	137 3.6	WNW		
D#1*	0630	69 38.0	137 3.4	WNW		
	0700	69 37.9	137 3.5	WNW		
	0730	69 38.3	137 3.4	WNW		
	0800	69 38.2	137 2.3	WNW		
	0830	69 38.3	137 3.5	WNW		
	0900	69 38.2	137 2.3	WNW		
	0930	69 37.7	137 3.5	WNW		
	1000	69 37.9	137 1.1	W		
	1030	69 38.1	137 0.3	W	8 mi	
	1100	69 38.3	136 59.6	W		
	1130	69 38.3	136 58.4	W		
	1200	69 38.5	136 57.5	W		
	1230	69 38.5	136 56.5	W		
13-08-74	0500	69 46.5	135 15.5	Calm	Fog	
D#2	0530	69 46.6	135 15.4	Calm	Fog	
	0600	69 46.5	135 15.3	Calm	Fog	
	0630	69 47.0	135 15.7	Calm	Fog	
13-08-74	1330	69 49.5	133 19.2	N	10-15	
D#3	1400	69 49.2	133 18.3	N	Fog	
	1435	69 48.9	133 18.0	N	Fog	
	1510	69 48.9	133 18.0	N	Fog	
	1530	69 48.4	133 17.6	N	Fog	
14-08-74	0410	70 7.9	134 23.1	WNW	15	
D#4	0530	70 7.5	135 22.2	WNW	15	
	0600	70 7.6	134 22.2	WNW	16	
	0630	70 7.6	134 22.0	WNW	17	
	0700	70 7.5	134 22.1	WNW	12	Snow
	0730	70 7.5	134 21.9	WNW	12	Snow
	0830	70 7.5	134 21.3	WNW	11	Snow
	0900	70 7.5	134 20.8	WNW	11	Snow
	0930	70 7.5	134 20.2	WNW	10	Snow
	1000	70 7.5	134 19.6	WNW	16	Snow
	1030	70 7.5	134 18.9	WNW	15	Snow
	1100	70 7.8	134 18.6			
	1130	70 7.4	134 17.4			
	1200	70 7.2	134 16.7	WNW	12	
	1230	70 7.2	134 15.7	WNW	14	
	1300	70 7.1	134 14.6	WNW	12	

*D# = Drift Figure Number

Ship's Drift Summer 1974
Page 2

DATE	TIME (GMT)	LATITUDE	LONGITUDE	WIND (mph) (°T)	
15-08-74 D#5	0200	70 8.2	134 15.0	WNW	13
	0433	70 7.8	134 14.1	WNW	13
	0500	70 7.7	134 14.2	WNW	13
	0600	70 7.6	134 14.6	WNW	11
	0630	70 7.5	134 14.6	WNW	11
	0730	70 7.4	134 15.2	WNW	12
	0800	70 7.4	134 15.3	WNW	12
	0830	70 7.3	134 15.5	WNW	12
	0900	70 7.5	134 15.0	WNW	12
	0930	70 7.3	134 15.6	WNW	10
	1000	70 7.3	134 15.8	WNW	10
	1030	70 7.3	134 15.8	NW	10
	1100	70 7.3	134 15.9	W	10
	1130	70 7.3	134 15.8	W	10
	1200	70 7.3	134 15.8	W	10
	1230	70 7.3	134 15.7	W	8
26-08-74 D#6	0440	69 59.2	132 54.9	ENE	10
	0600	69 59.5	132 55.6	ENE	12
	0630	69 59.7	132 56.2	ENE	10
	0700	69 59.7	132 56.2	ENE	10
	0800	69 59.7	132 56.2	ENE	11
	0900	69 59.8	132 55.9	ENE	8
	1000	69 59.8	132 55.5	ENE	8
	1100	70 0.1	132 55.3	E	8
	1200	70 0.2	132 55.0	ESE	10
	1300	70 0.3	132 55.2	ESE	9
	1335	70 0.4	132 55.1	SSW	9
27-08-74 D#7	0634	70 32.9	131 42.5	100	14
	0700	70 33.0	131 43.0	100	15
	0740	70 33.1	131 43.7		
	0800	70 33.1	131 44.0	100	14
	0900	70 32.7	131 42.1	100	18
	0930	70 33.0	131 42.3	100	17
	1000	70 33.1	131 42.5	135	18
	1100	70 33.3	131 43.4	120	18
	1200	70 33.7	131 43.9	110	15
	1300	70 33.7	131 44.3	110	13
	1415	70 33.4	131 44.7	110	11

Ship's Drift Summer 1974
Page Three

DATE	TIME (GMT)	LATITUDE	LONGITUDE	WIND (°T)	(mph)
28-08-74	0600	69 56.7	133 52.3	085	10
D#8	0700	69 57.2	133 52.8		
	0800	59 57.8	133 52.0		
	0900	69 58.3	133 52.2		
	1000	69 58.5	133 52.4		
	1100	69 59.1	133 52.6	095	12
	1200	69 59.5	133 52.7	115	12
29-08-74	0450	70 16.8	135 11.2	Calm	
D#9	0900	70 17.4	135 9.4		
	1100	70 17.5	135 8.2	045	5
	1200	70 17.4	135 7.9	045	6
	1300	70 17.3	135 7.9	115	8
	1400	70 17.3	135 8.3	080	8
	1500	70 17.4	135 8.5	135	10
	1605	70 17.5	135 8.9	135	12
	1700	70 17.8	135 9.2	130	12
	1800	70 18.1	135 9.5	130	12
	1900	70 18.5	135 9.6	135	12
	2000	70 18.8	135 9.5	135	14
	2100	70 19.2	135 9.3	135	18
	2200	70 19.6	135 9.4	135	18
	2300	70 19.7	135 9.5	135	20
30-08-74	0000	70 20.0	135 9.7	135	20
	0100	70 20.4	135 10.2	135	20
	0200	70 20.8	135 10.7	135	22
31-08-74	0613	70 7.1	136 50.4	090	10
D#10	0700	70 6.9	136 49.4	090	10
	0800	70 6.9	136 50.8	090	10
	0900	70 7.0	136 51.5	090	10
	1000	70 6.9	136 51.2	090	13
	1100	70 6.8	136 51.4	090	16
01-09-74	0900	70 1.5	139 7.4	305	12
D#11	1000	70 2.0	139 9.5	305	12
	1100	70 1.9	139 10.0	315	11
	1200	70 1.9	139 10.0	315	10

Ship's Drift Summer 1974
Page Four

DATE	TIME (GMT)	LATITUDE	LONGITUDE	WIND (°T)	(mph)
02-09-74	0535	69 29.4	138 21.3	300	22
* D#12	0602	69 28.7	138 20.3	315	19
	0632	69 27.2	138 19.4	315	18
	0720	69 27.4	138 17.1	315	20
	0755	69 27.3	138 15.4	315	20
	0835	69 28.3	138 13.3	315	16
	0905	69 28.3	138 12.9	315	16
	0935	69 27.4	138 12.3	315	16
	1000	69 26.4	138 11.9	315	16
	1025	69 27.5	138 11.0	315	11
	1100	69 28.3	138 10.3	315	9
	1120	69 28.3	138 10.0	315	8
	1200	69 28.3	138 9.4	315	8
03-09-74	0405	70 2.5	135 9.9	315	25
D#13	0500	70 2.2	135 9.3	315	22
	0600	70 1.9	135 8.7	315	25
	0650	70 1.7	135 8.2	315	25
	0720	70 1.5	135 8.0	315	24
	0800	70 1.2	135 7.5	320	24
	0850	70 1.0	135 7.3	330	24
	0935	70 0.9	135 7.3	320	24
	1100	70 0.7	135 7.4	350	26
	1200	70 0.6	135 7.8	020	26
04-09-74	0531	70 3.9	134 37.5	270	16
D#14	0600	70 3.6	134 37.1	315	15
	0630	70 3.3	134 36.5	320	16
	0700	70 3.0	134 35.9	320	16
	0800	70 2.5	134 34.8	320	16
05-09-74	0427	70 1.6	132 12.2	023	7
D#15	0500	70 1.6	132 12.3	020	10
	0554	70 1.5	132 12.4	020	9
	0625	70 1.5	132 12.5	025	10
	0641	70 1.5	132 12.5	025	10
	0730	70 1.4	132 12.5	020	10
	0830	70 1.5	132 12.5	025	10
	0930	70 1.5	132 12.4	020	10
	1000	70 1.5	132 12.4	023	8
	1100	70 1.5	132 12.4	350	11
	1200	70 1.6	132 11.9	330	12
	1240	70 1.6	132 12.6		

* Navigation questionable due to watch changes.

STATION 11 BEAUFORT SEA SUMMER 74-1

16- 8-74 5:00

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
0.	25.	329.	21.	-13.
1.	23.	340.	22.	-8.
3.	20.	339.	19.	-7.
5.	21.	17.	20.	6.
7.	4.	322.	3.	-2.
10.	15.	251.	-5.	-15.
15.	13.	25.	12.	5.
20.	5.	349.	5.	-1.
25.	8.	323.	6.	-5.
30.	7.	325.	5.	-4.
40.	10.	303.	6.	-9.
50.	11.	300.	6.	-10.
60.	11.	347.	11.	-3.

STATION 11 BEAUFORT SEA SUMMER 74-1

16- 8-74 6:18

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
0.	13.	290.	4.	-12.
1.	10.	305.	6.	-8.
3.	11.	19.	11.	4.
5.	4.	39.	3.	2.
7.	4.	251.	-1.	-3.
10.	12.	248.	-4.	-11.
15.	13.	215.	-11.	-7.
20.	12.	182.	-12.	-0.
25.	14.	173.	-14.	2.
30.	11.	168.	-11.	2.
40.	11.	133.	-8.	8.
50.	11.	228.	-8.	-8.

STATION 54 BEAUFORT SEA SUMMER 74-1

29- 8-74 5:33

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
0.	12.	75.	3.	12.
1.	13.	71.	4.	13.
3.	13.	82.	2.	13.
5.	10.	88.	0.	10.
7.	6.	77.	1.	6.
10.	12.	63.	5.	11.
15.	16.	37.	13.	10.
20.	18.	41.	13.	11.
25.	18.	42.	13.	12.
30.	19.	47.	13.	14.
35.	21.	82.	3.	21.
40.	23.	86.	2.	23.
45.	19.	98.	-3.	19.
50.	10.	103.	-2.	10.
52.	9.	87.	0.	9.

Currents Spring 75-1

Station	Date	Time (GMT)	Depth (m)	NS Comp (cm/sec)	EW Comp (cm/sec)
BS01*	16-03-75	2230	2	1	0
			3	-15	0
			4	-15	0
BS02*	17-03-75	1930	2	-4	-6/-9
			3	-5	-5
BS03	17-03-75	2009	3	2	-9
			4	-1	-9
BS04	17-03-75	2048	3	-11/+6	-3/-7
			4	-9 /+6	-6
BS05	17-03-75	2150	3	-2	-9
			4	-3	-9
BS06	21-03-75	1730	1	-40	-30
			2	-61	-61
BS07	21-03-75	1800	1	-21	-12

NOTE: Currents measured relative to ice; "*" indicates station on shorefast ice. Numbers separated by "/" indicate a range of observed values over a short period (less than 1 minute).

Under Ice Current - Spring 75-1

Station	Date	Time	NS Comp (cm/sec	EW Comp (cm/sec
Ice Camp A	20-03-75	0252	-24	-37
		0352	+18	+24
		0520	+18	-24
		0557	70	-30
		0633	-18	-15
		0700	-12	-12
		0733	-12	-18
		0804	-12	-17
		0825	-12	-15
		0905	-24	-18
		0927	-18	-15
		0955	-21	-12
		1016	-18	-14
		1100	-40	-15
		1130	-30	-15
		1157	-21	-12
		1230	-21	-09
		1258	-18	-12
		1328	-08	-12
		1352	-18	-14
		1430	-14	-09
		1533	-18	-15
		1545	-09	-10
		1720	-18	-18
		1810	-18	-18
		1910	-21	-15

Under Ice Current - Spring 75-1 (Continued)

Station	Date	Time (GMT)	NS Comp (cm/sec)	EW Comp (cm/sec)
Ice Camp A	20-03-75	2020	-30	-18
		2122	-08/-24/-12	-06/-09/-12
	21-03-75	0050	-17	-11
		0258	-25	-25
		0405	-37	-34
		0504	-37	-37
		0600	-34	-27
		0654	-13	-12
		1522	-40	-18
		1621	-52	-21

NOTE: Numbers separated by "/" indicate a range of observed values over a short period (less than 1 minute).

ICE DRIFT SPRING 1975

DATE	TIME (GMT)	LATITUDE	LONGITUDE	WIND* (^{o}T) (mph)
Ice Camp A				
March 19	1800	71 39.2	126 11.0	
March 20	0200	71 40.5	126 14.0	
March 20	1620	71 45.8	126 27.0	
March 21	0215	71 48.3	126 29.4	
March 21	1630	71 53.2	126 41.0	
March 21	2000	71 53.9	126 45.5	
March 21	2200	71 54.3	126 45.7	
#1				
April 25	0125	70 19.9	133 25.2	April 25-27
April 27	0309	70 20.5	133 32.5	180 12
May 1	0040	69 47.8	133 8.3	
May 6	0230	70 20.8	135 5.7	April 27 - May 1
May 10	1530	70 19.3	134 31.8	114 9
#2				
April 25	0327	70 43.2	133 22.3	May 1-6
April 27	0115	70 44.0	133 32.3	127 9
May 1	0240	70 43.1	133 27.2	
May 6	0430	70 44.1	133 08.6	May 6 -10
				267 12
#3				
April 25	0333	71 04.2	133 22.8	
April 27	0230	71 04.8	133 35.5	
May 1	0200			
May 6	0500	71 06.3	134 16.7	
May 10	1700	71 03.3	134 41.9	

*Mean wind between fixes.

ICE CAMP A BEAUFORT SEA SPRING 75-1

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
21-03-75 04:06					
	1.	11.	325.	9.	-6.
	3.	7.	330.	6.	-4.
	5.	13.	335.	12.	-6.
	7.	12.	325.	10.	-7.
	10.	7.	320.	6.	-5.
	15.	6.	333.	6.	-3.
	20.	5.	320.	4.	-3.
	30.	6.	350.	6.	-1.
	40.	5.	338.	5.	-2.
21-03-75 05:13					
	1.	18.	317.	13.	-12.
	3.	9.	305.	5.	-8.
	5.	12.	305.	7.	-10.
	7.	12.	310.	8.	-9.
	10.	8.	320.	6.	-5.
	15.	8.	328.	7.	-4.
	20.	8.	328.	7.	-4.
	30.	6.	288.	2.	-5.
	40.	5.	302.	3.	-4.
21-03-75 06:02					
	1.	19.	321.	14.	-12.
	3.	12.	324.	10.	-7.
	5.	12.	320.	9.	-8.
	7.	10.	327.	8.	-5.
	10.	10.	307.	6.	-8.
	15.	9.	304.	5.	-7.
	20.	6.	320.	5.	-4.
	30.	6.	335.	5.	-2.
	40.	6.	290.	2.	-6.
21-03-75 07:04					
	1.	15.	322.	12.	-10.
	3.	7.	332.	6.	-3.
	5.	5.	302.	3.	-4.
	7.	7.	296.	3.	-6.
	10.	6.	320.	4.	-4.
	15.	3.	353.	3.	-0.
	20.	4.	348.	4.	-1.
	30.	8.	273.	0.	-8.
	40.	6.	257.	-1.	-6.

ICE CAMP A BEAUFORT SEA SPRING 75-1

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
21-03-75 15:39					
	1.	12.	310.	8.	-9.
	3.	9.	312.	6.	-7.
	5.	7.	330.	6.	-4.
	7.	9.	347.	9.	-2.
	10.	8.	342.	7.	-2.
	15.	7.	320.	6.	-5.
	20.	7.	344.	7.	-2.
	30.	8.	350.	8.	-1.
	40.	8.	312.	6.	-6.
21-03-75 16:30					
	1.	16.	324.	13.	-9.
	3.	13.	338.	12.	-5.
	5.	9.	335.	8.	-4.
	7.	9.	337.	8.	-3.
	10.	8.	335.	7.	-3.
	15.	8.	352.	8.	-1.
	20.	10.	16.	9.	3.
	30.	7.	330.	6.	-4.
	40.	7.	296.	3.	-6.

ICE CAMP B BEAUFORT SEA SPRING 75-2

		DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
25-04-75	23:20					
		3.	2.	325.	1.	-1.
		5.	2.	100.	-0.	2.
		7.	3.	110.	-1.	2.
		10.	5.	0.	5.	0.
		15.	8.	5.	8.	1.
		20.	2.	60.	1.	1.
26-04-75	00:02					
		3.	2.	215.	-1.	-1.
		5.	2.	20.	1.	1.
		7.	4.	70.	1.	3.
		10.	6.	35.	5.	3.
		15.	9.	40.	7.	6.
		20.	3.	55.	1.	2.
26-04-75	01:30					
		3.	0.	340.	0.	0.
		5.	2.	45.	1.	1.
		7.	4.	45.	3.	3.
		10.	9.	65.	4.	8.
		15.	12.	70.	4.	12.
		20.	3.	55.	1.	2.
26-04-75	03:20					
		3.	0.	65.	0.	0.
		5.	3.	140.	-2.	2.
		7.	3.	95.	-0.	3.
		10.	5.	100.	-1.	5.
		15.	10.	120.	-5.	9.
		20.	1.	80.	0.	1.
26-04-75	04:07					
		3.	3.	350.	3.	-1.
		5.	3.	155.	-3.	1.
		7.	4.	120.	-2.	4.
		10.	6.	140.	-5.	4.
		15.	9.	150.	-8.	5.
		20.	0.	125.	0.	0.

ICE CAMP B BEAUFORT SEA SPRING 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
26-04-75 05:27					
	3.	1.	290.	0.	-0.
	5.	1.	275.	0.	-1.
	7.	2.	190.	-2.	-0.
	10.	8.	190.	-8.	-1.
	15.	11.	180.	-11.	0.
	20.	3.	75.	1.	2.
26-04-75 06:00					
	3.	2.	20.	1.	1.
	5.	2.	160.	-1.	1.
	7.	7.	135.	-5.	5.
	10.	9.	160.	-9.	3.
	15.	11.	160.	-10.	4.
	20.	2.	165.	-1.	0.
26-04-75 07:08					
	3.	0.	260.	0.	0.
	5.	2.	300.	1.	-2.
	7.	10.	160.	-10.	4.
	10.	13.	150.	-12.	7.
	15.	11.	210.	-10.	-6.
	20.	6.	185.	-6.	-0.
26-04-75 08:00					
	3.	1.	330.	0.	-0.
	5.	2.	100.	-0.	2.
	7.	9.	165.	-9.	2.
	10.	9.	200.	-9.	-3.
	15.	9.	245.	-4.	-8.
	20.	2.	175.	-2.	0.
26-04-75 09:04					
	3.	3.	160.	-3.	1.
	5.	4.	95.	-0.	4.
	7.	7.	123.	-4.	6.
	10.	5.	250.	-2.	-5.
	15.	8.	280.	1.	-8.
	20.	1.	225.	-1.	-1.

ICE CAMP B BEAUFORT SEA SPRING 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
26-04-75 10:00					
	3.	1.	340.	1.	-0.
	5.	2.	45.	1.	1.
	7.	1.	120.	-1.	1.
	10.	4.	320.	3.	-2.
	15.	8.	320.	6.	-5.
	20.	3.	345.	2.	-1.
26-04-75 11:03					
	3.	0.	0.	0.	0.
	5.	1.	20.	1.	0.
	7.	3.	50.	2.	2.
	10.	6.	345.	6.	-2.
	15.	10.	345.	9.	-3.
	20.	1.	340.	0.	-0.
26-04-75 12:05					
	3.	1.	50.	0.	0.
	5.	2.	110.	-1.	2.
	7.	2.	35.	1.	1.
	10.	8.	20.	8.	3.
	15.	12.	0.	12.	0.
	20.	2.	25.	1.	1.
26-04-75 13:04					
	3.	1.	245.	-0.	-0.
	5.	1.	65.	0.	0.
	7.	4.	45.	3.	3.
	10.	8.	35.	7.	5.
	15.	12.	50.	8.	9.
	20.	2.	0.	2.	0.
26-04-75 14:08					
	3.	1.	35.	0.	0.
	5.	2.	170.	-2.	0.
	7.	3.	95.	-0.	3.
	10.	8.	50.	5.	6.
	15.	10.	70.	4.	10.
	20.	3.	10.	3.	0.

ICE CAMP B BEAUFORT SEA SPRING 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
26-04-75 15:04					
	3.	0.	0.	0.	0.
	5.	2.	130.	-1.	2.
	7.	4.	105.	-1.	4.
	10.	4.	45.	3.	3.
	15.	7.	95.	-1.	7.
	20.	2.	320.	2.	-1.
26-04-75 16:00					
	3.	2.	355.	2.	-0.
	5.	2.	150.	-1.	1.
	7.	5.	150.	-4.	2.
	10.	4.	150.	-4.	2.
	15.	5.	125.	-3.	4.
	20.	2.	260.	-0.	-2.
26-04-75 17:13					
	3.	0.	40.	0.	0.
	5.	4.	160.	-3.	1.
	7.	5.	160.	-5.	2.
	10.	9.	160.	-8.	3.
	15.	8.	180.	-8.	0.
	20.	4.	245.	-2.	-3.
26-04-75 18:04					
	3.	2.	280.	0.	-2.
	5.	4.	15.	3.	1.
	7.	4.	180.	-4.	0.
	10.	8.	180.	-8.	0.
	15.	11.	210.	-9.	-5.
	20.	2.	220.	-2.	-1.
26-04-75 19:04					
	3.	0.	195.	0.	0.
	5.	2.	260.	-0.	-2.
	7.	8.	195.	-7.	-2.
	10.	10.	200.	-10.	-4.
	15.	13.	250.	-4.	-12.
	20.	3.	220.	-2.	-2.

ICE CAMP B BEAUFORT SEA SPRING 75-2

		DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
26-04-75	20:00					
		3.	1.	135.	-0.	0.
		5.	2.	255.	-0.	-1.
		7.	8.	215.	-7.	-5.
		10.	12.	215.	-10.	-7.
		15.	12.	250.	-4.	-12.
		20.	2.	242.	-1.	-1.
26-04-75	21:03					
		3.	0.	0.	0.	0.
		5.	2.	280.	0.	-2.
		7.	6.	205.	-6.	-3.
		10.	9.	255.	-2.	-8.
		15.	12.	275.	1.	-12.
		20.	3.	275.	0.	-3.
26-04-75	22:02					
		3.	0.	0.	0.	0.
		5.	3.	350.	3.	-0.
		7.	3.	220.	-2.	-2.
		10.	6.	305.	3.	-5.
		15.	9.	285.	2.	-9.
		20.	4.	340.	3.	-1.
26-04-75	23:02					
		3.	1.	355.	1.	-0.
		5.	1.	105.	-0.	0.
		7.	2.	45.	1.	1.
		10.	7.	350.	7.	-1.
		15.	10.	325.	8.	-6.
		20.	3.	355.	3.	-0.
26-04-75	23:59					
		3.	1.	185.	-1.	-0.
		5.	0.	0.	0.	0.
		7.	2.	355.	2.	-0.
		10.	9.	10.	9.	2.
		15.	14.	15.	13.	4.
		20.	4.	5.	4.	0.

ICE CAMP B BEAUFORT SEA SPRING 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
27-04-75 01:04					
	3.	1.	350.	1.	-0.
	5.	2.	5.	2.	0.
	7.	4.	25.	3.	2.
	10.	14.	40.	11.	9.
	15.	16.	50.	10.	12.
	20.	6.	15.	6.	2.
27-04-75 02:10					
	3.	0.	75.	0.	0.
	5.	3.	345.	3.	-1.
	7.	5.	40.	4.	3.
	10.	15.	45.	11.	11.
	15.	16.	70.	6.	15.
	20.	5.	25.	4.	2.
27-04-75 03:05					
	3.	1.	115.	-0.	1.
	5.	3.	295.	1.	-3.
	7.	5.	50.	3.	4.
	10.	18.	50.	12.	14.
	15.	14.	60.	7.	12.
	20.	3.	40.	2.	2.
27-04-75 04:10					
	3.	0.	80.	0.	0.
	5.	4.	357.	4.	-0.
	7.	3.	62.	1.	2.
	10.	8.	70.	3.	7.
	15.	12.	77.	3.	12.
	20.	3.	13.	3.	1.
27-04-75 05:02					
	3.	2.	330.	1.	-1.
	5.	2.	35.	1.	1.
	7.	1.	90.	0.	1.
	10.	8.	100.	-1.	8.
	15.	6.	105.	-2.	6.
	20.	1.	5.	1.	0.

ICE CAMP B BEAUFORT SEA SPRING 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
27-04-75 06:18					
	3.	0.	350.	0.	0.
	5.	2.	350.	2.	-0.
	7.	4.	165.	-3.	1.
	10.	5.	135.	-3.	3.
	15.	6.	175.	-6.	0.
	20.	2.	15.	2.	1.
27-04-75 07:28					
	3.	0.	20.	0.	0.
	5.	2.	15.	1.	0.
	7.	3.	180.	-3.	0.
	10.	6.	180.	-6.	0.
	15.	5.	220.	-4.	-3.
	20.	1.	320.	1.	-1.
27-04-75 15:25					
	3.	1.	55.	0.	0.
	5.	2.	290.	1.	-2.
	7.	1.	105.	-0.	1.
	10.	10.	55.	6.	8.
	15.	6.	65.	2.	5.
	20.	2.	50.	1.	1.
27-04-75 16:05					
	3.	0.	45.	0.	0.
	5.	2.	250.	-1.	-1.
	7.	3.	165.	-3.	1.
	10.	5.	50.	3.	4.
	15.	5.	90.	0.	5.
	20.	3.	15.	3.	1.
27-04-75 17:06					
	3.	2.	340.	1.	-1.
	5.	2.	285.	1.	-2.
	7.	3.	190.	-3.	-1.
	10.	3.	130.	-2.	2.
	15.	6.	140.	-4.	4.
	20.	1.	220.	-0.	-0.

ICE CAMP B BEAUFORT SEA SPRING 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
27-04-75 18:05				
3.	0.	45.	0.	0.
5.	2.	100.	-0.	2.
7.	3.	200.	-3.	-1.
10.	9.	165.	-8.	2.
15.	8.	210.	-7.	-4.
20.	4.	215.	-3.	-2.
27-04-75 19:01				
3.	1.	350.	1.	-0.
5.	1.	185.	-1.	-0.
7.	6.	205.	-6.	-3.
10.	10.	185.	-10.	-1.
15.	8.	200.	-8.	-3.
20.	4.	215.	-3.	-2.
27-04-75 20:06				
3.	0.	345.	0.	0.
5.	4.	225.	-3.	-3.
7.	8.	220.	-6.	-5.
10.	13.	210.	-11.	-6.
15.	9.	225.	-7.	-7.
20.	3.	250.	-1.	-3.
27-04-75 21:00				
3.	2.	355.	2.	-0.
5.	2.	205.	-1.	-1.
7.	6.	215.	-5.	-3.
10.	9.	215.	-8.	-5.
15.	7.	230.	-4.	-5.
20.	3.	215.	-2.	-1.
27-04-75 22:05				
3.	1.	30.	0.	0.
5.	1.	95.	-0.	1.
7.	4.	225.	-3.	-3.
10.	6.	245.	-3.	-6.
15.	5.	275.	0.	-5.
20.	3.	220.	-2.	-2.

ICE CAMP B BEAUFORT SEA SPRING 75-2

		DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
27-04-75	23:00					
		3.	1.	350.	1.	-0.
		5.	4.	125.	-2.	3.
		7.	1.	280.	0.	-1.
		10.	5.	285.	1.	-4.
		15.	5.	315.	3.	-3.
		20.	2.	280.	0.	-2.
28-04-75	00:12					
		3.	0.	330.	0.	0.
		5.	3.	120.	-1.	2.
		7.	3.	20.	2.	1.
		10.	5.	330.	4.	-2.
		15.	7.	15.	7.	2.
		20.	3.	5.	3.	0.
28-04-75	01:02					
		3.	1.	50.	0.	0.
		5.	1.	125.	-0.	0.
		7.	2.	10.	2.	0.
		10.	8.	0.	8.	0.
		15.	9.	5.	9.	1.
		20.	4.	350.	4.	-1.
28-04-75	02:09					
		3.	0.	30.	0.	0.
		5.	4.	290.	1.	-4.
		7.	2.	355.	2.	-0.
		10.	12.	360.	12.	-0.
		15.	11.	40.	9.	7.
		20.	5.	10.	5.	1.
28-04-75	03:04					
		3.	0.	50.	0.	0.
		5.	3.	320.	2.	-2.
		7.	3.	5.	3.	0.
		10.	13.	40.	10.	8.
		15.	13.	45.	9.	9.
		20.	5.	40.	4.	3.

ICE CAMP B BEAUFORT SEA SPRING 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
28-04-75 04:08					
	3.	0.	175.	0.	0.
	5.	2.	295.	1.	-2.
	7.	3.	20.	3.	1.
	10.	12.	40.	9.	8.
	15.	8.	65.	3.	7.
	20.	3.	70.	1.	2.
28-04-75 05:17					
	3.	0.	45.	0.	0.
	5.	2.	20.	2.	1.
	7.	2.	5.	2.	0.
	10.	7.	85.	1.	7.
	15.	7.	105.	-2.	6.
	20.	1.	50.	0.	0.
28-04-75 14:24					
	3.	0.	70.	0.	0.
	5.	1.	35.	0.	0.
	7.	3.	10.	3.	1.
	10.	4.	35.	3.	2.
	15.	9.	40.	7.	6.
	20.	4.	25.	3.	2.

ICE CAMP C BEAUFORT SEA 75-2

		DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75	04:54					
		2.	2.	360.	2.	-0.
		3.	2.	335.	1.	-1.
		5.	4.	5.	4.	0.
		7.	5.	10.	5.	1.
		10.	2.	50.	1.	2.
		15.	2.	40.	2.	1.
		20.	6.	30.	5.	3.
		30.	7.	330.	6.	-3.
		40.	7.	320.	5.	-4.
		50.	6.	325.	5.	-3.
01-05-75	06:10					
		2.	1.	35.	0.	0.
		3.	3.	20.	2.	1.
		5.	3.	10.	3.	1.
		7.	4.	5.	4.	0.
		10.	2.	45.	1.	1.
		15.	3.	35.	2.	1.
		20.	6.	55.	4.	5.
		30.	6.	330.	5.	-3.
		40.	8.	5.	8.	1.
		50.	6.	305.	4.	-5.
01-05-75	07:04					
		2.	1.	30.	0.	0.
		3.	1.	310.	0.	-0.
		5.	2.	10.	2.	0.
		7.	5.	360.	5.	-0.
		10.	1.	355.	1.	-0.
		15.	2.	35.	2.	1.
		20.	4.	30.	3.	2.
		30.	6.	5.	6.	0.
		40.	6.	330.	5.	-3.
		50.	7.	325.	5.	-4.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75 08:09					
	2.	0.	15.	0.	0.
	3.	1.	5.	1.	0.
	5.	3.	15.	3.	1.
	7.	4.	10.	4.	1.
	10.	1.	75.	0.	0.
	15.	2.	30.	1.	1.
	20.	3.	50.	2.	2.
	30.	5.	5.	5.	0.
	40.	8.	10.	8.	1.
	50.	6.	320.	5.	-4.
01-05-75 08:56					
	2.	1.	230.	-0.	-0.
	3.	1.	320.	0.	-0.
	5.	3.	5.	3.	0.
	7.	5.	2.	5.	0.
	10.	1.	190.	-1.	-0.
	15.	2.	35.	1.	1.
	20.	2.	35.	2.	1.
	30.	5.	5.	5.	0.
	40.	8.	350.	8.	-1.
	50.	7.	315.	5.	-5.
01-05-75 10:10					
	2.	1.	10.	1.	0.
	3.	1.	360.	1.	-0.
	5.	2.	360.	2.	-0.
	7.	6.	10.	6.	1.
	10.	1.	60.	0.	0.
	15.	1.	60.	1.	1.
	20.	3.	5.	3.	0.
	30.	4.	25.	4.	2.
	40.	7.	5.	7.	1.
	50.	8.	325.	7.	-5.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75 11:01					
	2.	1.	10.	1.	0.
	3.	1.	175.	-1.	0.
	5.	4.	10.	4.	1.
	7.	8.	15.	7.	2.
	10.	1.	240.	-0.	-0.
	15.	2.	50.	1.	1.
	20.	2.	25.	2.	1.
	30.	3.	5.	3.	0.
	40.	7.	340.	7.	-2.
	50.	8.	320.	6.	-5.
01-05-75 12:08					
	2.	1.	0.	1.	0.
	3.	1.	325.	1.	-1.
	5.	3.	360.	3.	-0.
	7.	8.	10.	8.	1.
	10.	1.	320.	0.	-0.
	15.	1.	135.	-1.	1.
	20.	3.	355.	3.	-0.
	30.	3.	5.	3.	0.
	40.	6.	335.	5.	-2.
	50.	8.	340.	7.	-3.
01-05-75 13:00					
	2.	1.	355.	1.	-0.
	3.	1.	155.	-0.	0.
	5.	4.	360.	4.	-0.
	7.	8.	10.	8.	1.
	10.	1.	355.	1.	-0.
	15.	1.	15.	0.	0.
	20.	1.	345.	1.	-0.
	30.	2.	340.	2.	-1.
	40.	6.	340.	6.	-2.
	50.	7.	330.	6.	-4.

ICE CAMP C BEAUFORT SEA 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75 14:07				
2.	1.	330.	0.	-0.
3.	0.	305.	0.	0.
5.	4.	340.	4.	-1.
7.	8.	5.	8.	1.
10.	2.	310.	1.	-1.
15.	1.	360.	1.	-0.
20.	4.	330.	4.	-2.
30.	4.	355.	4.	-0.
40.	6.	330.	5.	-3.
50.	9.	305.	5.	-8.
01-05-75 15:08				
2.	0.	350.	0.	0.
3.	1.	5.	1.	0.
5.	5.	360.	5.	-0.
7.	9.	355.	9.	-1.
10.	2.	360.	2.	-0.
15.	2.	360.	2.	-0.
20.	3.	340.	3.	-1.
30.	4.	320.	3.	-3.
40.	9.	310.	6.	-7.
50.	10.	310.	7.	-8.
01-05-75 16:15				
2.	0.	50.	0.	0.
3.	1.	5.	1.	0.
5.	2.	5.	2.	0.
7.	9.	360.	9.	-0.
10.	3.	220.	-2.	-2.
15.	2.	345.	1.	-0.
20.	3.	360.	3.	-0.
30.	6.	305.	3.	-5.
40.	9.	325.	7.	-5.
50.	11.	305.	6.	-9.

ICE CAMP C BEAUFORT SEA 75-2

		DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75	17:02					
		2.	1.	350.	1.	-0.
		3.	2.	10.	2.	0.
		5.	4.	350.	4.	-1.
		7.	7.	360.	7.	-0.
		10.	2.	280.	0.	-2.
		15.	2.	340.	1.	-1.
		20.	4.	340.	3.	-1.
		30.	6.	325.	5.	-4.
		40.	10.	310.	7.	-8.
		50.	11.	305.	6.	-9.
01-05-75	18:14					
		2.	0.	320.	0.	0.
		3.	1.	320.	1.	-1.
		5.	4.	340.	3.	-1.
		7.	8.	340.	8.	-3.
		10.	2.	300.	1.	-2.
		15.	2.	360.	2.	-0.
		20.	2.	355.	2.	-0.
		30.	6.	320.	5.	-4.
		40.	10.	350.	10.	-2.
		50.	10.	300.	5.	-9.
01-05-75	19:01					
		2.	1.	340.	1.	-0.
		3.	2.	40.	2.	1.
		5.	5.	340.	4.	-2.
		7.	8.	360.	8.	-0.
		10.	3.	340.	2.	-1.
		15.	2.	350.	2.	-0.
		20.	2.	355.	2.	-0.
		30.	5.	335.	5.	-2.
		40.	11.	315.	8.	-8.
		50.	9.	305.	5.	-7.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75 20:18					
	2.	0.	320.	0.	0.
	3.	0.	355.	0.	0.
	5.	5.	360.	5.	-0.
	7.	7.	335.	6.	-3.
	10.	2.	25.	2.	1.
	15.	2.	335.	2.	-1.
	20.	1.	310.	1.	-1.
	30.	6.	340.	5.	-2.
	40.	9.	345.	9.	-2.
	50.	8.	305.	5.	-7.
01-05-75 21:04					
	2.	1.	360.	1.	-0.
	3.	1.	320.	0.	-0.
	5.	4.	355.	4.	-0.
	7.	7.	10.	7.	1.
	10.	2.	15.	1.	0.
	15.	1.	305.	1.	-1.
	20.	1.	310.	0.	-0.
	30.	4.	350.	4.	-1.
	40.	11.	305.	6.	-9.
	50.	8.	305.	4.	-6.
01-05-75 22:18					
	2.	1.	100.	-0.	1.
	3.	1.	15.	1.	0.
	5.	4.	360.	4.	-0.
	7.	6.	355.	6.	-1.
	10.	2.	40.	1.	1.
	15.	1.	275.	0.	-1.
	20.	1.	230.	-0.	-0.
	30.	4.	20.	3.	1.
	40.	8.	305.	4.	-6.
	50.	8.	300.	4.	-7.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
01-05-75 23:00					
	2.	2.	320.	1.	-1.
	3.	1.	350.	1.	-0.
	5.	4.	15.	4.	1.
	7.	7.	20.	6.	2.
	10.	2.	50.	1.	1.
	15.	2.	320.	1.	-1.
	20.	1.	185.	-1.	-0.
	30.	3.	5.	3.	0.
	40.	8.	315.	5.	-5.
	50.	8.	305.	4.	-6.
02-05-75 00:10					
	2.	1.	340.	1.	-0.
	3.	2.	10.	2.	0.
	5.	5.	5.	5.	0.
	7.	7.	25.	7.	3.
	10.	3.	25.	2.	1.
	15.	1.	230.	-1.	-1.
	20.	2.	250.	-1.	-2.
	30.	2.	320.	1.	-1.
	40.	6.	300.	3.	-5.
	50.	8.	315.	5.	-5.
02-05-75 01:00					
	2.	1.	285.	0.	-0.
	3.	2.	275.	0.	-2.
	5.	3.	25.	2.	1.
	7.	7.	5.	7.	1.
	10.	1.	360.	1.	-0.
	15.	1.	225.	-1.	-1.
	20.	1.	235.	-1.	-1.
	30.	1.	310.	0.	-0.
	40.	9.	305.	5.	-7.
	50.	7.	305.	4.	-5.

ICE CAMP C BEAUFORT SEA 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 02:10				
2.	0.	335.	0.	0.
3.	1.	30.	1.	1.
5.	4.	350.	4.	-1.
7.	8.	350.	8.	-1.
10.	3.	350.	3.	-0.
15.	2.	225.	-1.	-1.
20.	2.	235.	-1.	-2.
30.	2.	330.	2.	-1.
40.	6.	300.	3.	-5.
50.	7.	300.	3.	-6.
02-05-75 03:05				
2.	1.	355.	1.	-0.
3.	1.	140.	-1.	1.
5.	4.	355.	4.	-0.
7.	9.	360.	9.	-0.
10.	2.	355.	2.	-0.
15.	2.	250.	-1.	-1.
20.	2.	235.	-1.	-1.
30.	3.	305.	1.	-2.
40.	3.	325.	3.	-2.
50.	6.	315.	4.	-4.
02-05-75 04:14				
2.	0.	320.	0.	0.
3.	0.	325.	0.	0.
5.	4.	345.	4.	-1.
7.	8.	345.	7.	-2.
10.	3.	345.	3.	-1.
15.	4.	285.	1.	-3.
20.	2.	240.	-1.	-1.
30.	4.	295.	2.	-3.
40.	3.	355.	3.	-0.
50.	9.	290.	3.	-8.

ICE CAMP C BEAUFORT SEA 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 05:03				
2.	1.	330.	1.	-1.
3.	2.	355.	2.	-0.
5.	5.	350.	5.	-1.
7.	9.	350.	9.	-2.
10.	3.	355.	3.	-0.
15.	2.	240.	-1.	-2.
20.	3.	240.	-2.	-3.
30.	4.	305.	2.	-3.
40.	4.	335.	3.	-2.
50.	8.	295.	3.	-7.
02-05-75 07:12				
2.	1.	320.	0.	-0.
3.	1.	50.	0.	0.
5.	3.	5.	3.	0.
7.	8.	360.	8.	-0.
10.	3.	345.	3.	-1.
15.	2.	195.	-2.	-1.
20.	2.	215.	-2.	-1.
30.	3.	330.	2.	-1.
40.	3.	20.	3.	1.
50.	9.	295.	4.	-8.
02-05-75 08:50				
2.	1.	0.	1.	0.
3.	1.	355.	1.	-0.
5.	5.	20.	4.	2.
7.	6.	5.	6.	0.
10.	3.	20.	3.	1.
15.	4.	180.	-4.	0.
20.	3.	180.	-3.	0.
30.	2.	0.	2.	0.
40.	4.	40.	3.	2.
50.	6.	325.	5.	-3.

ICE CAMP C BEAUFORT SEA 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 10:20				
2.	0.	335.	0.	0.
3.	1.	5.	1.	0.
5.	3.	350.	3.	-0.
7.	6.	350.	6.	-1.
10.	3.	70.	1.	2.
15.	3.	150.	-3.	2.
20.	3.	180.	-3.	0.
30.	3.	15.	3.	1.
40.	4.	55.	2.	3.
50.	6.	320.	5.	-4.
02-05-75 11:04				
2.	2.	340.	2.	-1.
3.	3.	10.	3.	1.
5.	3.	15.	2.	1.
7.	8.	5.	8.	1.
10.	2.	90.	0.	2.
15.	3.	155.	-2.	1.
20.	3.	155.	-3.	1.
30.	3.	45.	2.	2.
40.	4.	20.	4.	1.
50.	6.	310.	4.	-4.
02-05-75 12:09				
2.	1.	330.	0.	-0.
3.	1.	355.	1.	-0.
5.	2.	5.	2.	0.
7.	7.	5.	7.	1.
10.	2.	120.	-1.	1.
15.	3.	155.	-3.	1.
20.	3.	135.	-2.	2.
30.	3.	65.	1.	3.
40.	4.	10.	4.	1.
50.	7.	325.	5.	-4.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 13:00					
	2.	1.	350.	1.	-0.
	3.	2.	50.	1.	1.
	5.	3.	20.	3.	1.
	7.	6.	5.	6.	1.
	10.	2.	130.	-1.	2.
	15.	4.	145.	-3.	2.
	20.	4.	145.	-3.	2.
	30.	3.	50.	2.	2.
	40.	5.	5.	5.	0.
	50.	6.	325.	5.	-4.
02-05-75 14:08					
	2.	1.	350.	1.	-0.
	3.	1.	5.	1.	0.
	5.	2.	5.	2.	0.
	7.	7.	360.	7.	-0.
	10.	1.	170.	-1.	0.
	15.	2.	170.	-2.	0.
	20.	3.	135.	-2.	2.
	30.	2.	75.	1.	2.
	40.	4.	0.	4.	0.
	50.	6.	330.	5.	-3.
02-05-75 15:01					
	2.	3.	360.	3.	-0.
	3.	4.	5.	4.	0.
	5.	6.	355.	6.	-1.
	7.	6.	5.	6.	1.
	10.	2.	115.	-1.	1.
	15.	2.	160.	-2.	1.
	20.	3.	140.	-2.	2.
	30.	1.	40.	1.	1.
	40.	6.	360.	6.	-0.
	50.	6.	330.	5.	-3.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 16:11					
	2.	1.	340.	1.	-0.
	3.	3.	5.	3.	0.
	5.	4.	355.	4.	-0.
	7.	6.	355.	6.	-1.
	10.	1.	80.	0.	1.
	15.	2.	150.	-2.	1.
	20.	2.	170.	-2.	0.
	30.	2.	50.	1.	2.
	40.	5.	350.	5.	-1.
	50.	6.	345.	6.	-2.
02-05-75 17:04					
	2.	2.	355.	2.	-0.
	3.	2.	350.	2.	-0.
	5.	4.	355.	4.	-0.
	7.	7.	355.	7.	-1.
	10.	3.	65.	1.	2.
	15.	2.	145.	-1.	1.
	20.	2.	155.	-1.	1.
	30.	3.	15.	2.	1.
	40.	4.	15.	3.	1.
	50.	6.	335.	5.	-2.
02-05-75 18:09					
	2.	0.	335.	0.	0.
	3.	1.	335.	0.	-0.
	5.	3.	340.	3.	-1.
	7.	5.	325.	4.	-3.
	10.	2.	80.	0.	2.
	15.	2.	140.	-2.	1.
	20.	3.	175.	-3.	0.
	30.	1.	310.	0.	-0.
	40.	5.	55.	3.	4.
	50.	6.	330.	5.	-3.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 19:01					
	2.	2.	355.	2.	-0.
	3.	1.	5.	1.	0.
	5.	3.	5.	3.	0.
	7.	5.	5.	5.	0.
	10.	1.	90.	0.	1.
	15.	2.	120.	-1.	2.
	20.	2.	140.	-2.	1.
	30.	2.	10.	2.	0.
	40.	3.	20.	2.	1.
	50.	5.	330.	4.	-2.
02-05-75 20:12					
	2.	2.	265.	-0.	-2.
	3.	1.	275.	0.	-1.
	5.	4.	280.	1.	-4.
	7.	6.	295.	2.	-5.
	10.	3.	65.	1.	2.
	15.	3.	125.	-1.	2.
	20.	3.	75.	1.	2.
	30.	2.	320.	2.	-1.
	40.	4.	10.	4.	1.
	50.	4.	275.	0.	-4.
02-05-75 21:02					
	2.	2.	10.	2.	0.
	3.	2.	20.	2.	1.
	5.	3.	15.	3.	1.
	7.	4.	10.	4.	1.
	10.	3.	125.	-2.	3.
	15.	4.	160.	-3.	1.
	20.	2.	150.	-2.	1.
	30.	3.	50.	2.	2.
	40.	4.	45.	3.	3.
	50.	4.	350.	4.	-1.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
02-05-75 22:07					
	2.	2.	15.	2.	1.
	3.	2.	15.	2.	1.
	5.	3.	35.	2.	1.
	7.	5.	15.	5.	1.
	10.	4.	130.	-3.	3.
	15.	5.	145.	-4.	3.
	20.	4.	165.	-4.	1.
	30.	6.	55.	3.	5.
	40.	4.	140.	-3.	2.
	50.	4.	0.	4.	0.
02-05-75 23:03					
	2.	2.	145.	-2.	1.
	3.	2.	150.	-1.	1.
	5.	3.	110.	-1.	2.
	7.	4.	150.	-4.	2.
	10.	4.	165.	-3.	1.
	15.	4.	150.	-4.	2.
	20.	4.	105.	-1.	4.
	30.	4.	80.	1.	4.
	40.	2.	40.	2.	1.
	50.	2.	355.	2.	-0.
03-05-75 00:08					
	2.	2.	20.	1.	1.
	3.	4.	40.	3.	2.
	5.	3.	35.	2.	1.
	7.	5.	35.	4.	3.
	10.	2.	85.	0.	2.
	15.	7.	120.	-3.	6.
	20.	4.	130.	-2.	3.
	30.	5.	80.	1.	5.
	40.	5.	75.	1.	4.
	50.	3.	325.	3.	-2.

ICE CAMP C BEAUFORT SEA 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
03-05-75 01:02				
2.	3.	10.	3.	1.
3.	2.	15.	2.	1.
5.	3.	10.	3.	0.
7.	4.	20.	4.	1.
10.	3.	145.	-3.	2.
15.	4.	140.	-3.	3.
20.	3.	130.	-2.	2.
30.	4.	100.	-1.	4.
40.	2.	30.	2.	1.
50.	4.	325.	3.	-2.
03-05-75 02:12				
2.	2.	350.	2.	-0.
3.	2.	10.	2.	0.
5.	3.	20.	3.	1.
7.	4.	15.	4.	1.
10.	2.	165.	-2.	1.
15.	4.	170.	-4.	1.
20.	4.	145.	-3.	2.
30.	3.	115.	-1.	3.
40.	3.	35.	3.	2.
50.	5.	350.	5.	-1.
03-05-75 03:08				
2.	3.	10.	3.	1.
3.	4.	10.	4.	1.
5.	3.	20.	2.	1.
7.	4.	15.	3.	1.
10.	1.	145.	-1.	1.
15.	3.	160.	-3.	1.
20.	2.	160.	-2.	1.
30.	2.	105.	-0.	1.
40.	2.	35.	2.	1.
50.	4.	355.	4.	-0.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
03-05-75 04:13					
	2.	2.	10.	2.	0.
	3.	3.	360.	3.	-0.
	5.	3.	10.	3.	0.
	7.	4.	20.	3.	1.
	10.	1.	140.	-0.	0.
	15.	3.	170.	-3.	0.
	20.	2.	170.	-2.	0.
	30.	1.	30.	0.	0.
	40.	3.	90.	0.	3.
	50.	3.	320.	2.	-2.
03-05-75 05:05					
	2.	2.	15.	2.	1.
	3.	3.	15.	2.	1.
	5.	3.	20.	3.	1.
	7.	4.	140.	-3.	2.
	10.	2.	130.	-1.	2.
	15.	3.	135.	-2.	2.
	20.	2.	135.	-1.	1.
	30.	0.	25.	0.	0.
	40.	2.	15.	2.	1.
	50.	3.	320.	2.	-2.
03-05-75 06:12					
	2.	2.	170.	-2.	0.
	3.	2.	170.	-2.	0.
	5.	2.	175.	-2.	0.
	7.	4.	360.	4.	-0.
	10.	2.	110.	-1.	2.
	15.	4.	135.	-3.	3.
	20.	2.	160.	-1.	1.
	30.	2.	15.	1.	0.
	40.	2.	50.	1.	2.
	50.	4.	355.	4.	-0.

ICE CAMP C BEAUFORT SEA 75-2

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
03-05-75 14:30				
2.	2.	5.	2.	0.
3.	2.	20.	2.	1.
5.	1.	10.	1.	0.
7.	1.	85.	0.	1.
10.	2.	145.	-2.	1.
15.	3.	135.	-2.	2.
20.	3.	145.	-2.	1.
30.	3.	100.	-1.	3.
40.	4.	10.	4.	1.
50.	4.	10.	4.	1.
03-05-75 15:35				
2.	2.	10.	2.	0.
3.	2.	25.	2.	1.
5.	1.	45.	0.	0.
7.	2.	55.	1.	1.
10.	3.	190.	-3.	-0.
15.	2.	155.	-1.	1.
20.	3.	135.	-2.	2.
30.	4.	135.	-3.	3.
40.	2.	25.	2.	1.
50.	4.	355.	4.	-0.
03-05-75 17:18				
2.	2.	10.	2.	0.
3.	3.	5.	3.	0.
5.	1.	355.	1.	-0.
7.	1.	55.	0.	0.
10.	1.	135.	-1.	1.
15.	1.	200.	-0.	-0.
20.	2.	162.	-1.	0.
30.	1.	135.	-1.	1.
40.	3.	25.	3.	1.
50.	3.	360.	3.	-0.

ICE CAMP C BEAUFORT SEA 75-2

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
03-05-75 19:39					
	2.	1.	5.	1.	0.
	3.	1.	5.	1.	0.
	5.	1.	10.	1.	0.
	7.	1.	30.	0.	0.
	10.	1.	75.	0.	0.
	15.	1.	50.	0.	0.
	20.	1.	195.	-0.	-0.
	30.	1.	270.	-0.	-1.
	40.	1.	65.	0.	0.
	50.	1.	355.	1.	-0.
03-05-75 21:30					
	2.	1.	335.	1.	-0.
	3.	1.	355.	1.	-0.
	5.	1.	340.	0.	-0.
	7.	1.	105.	-0.	0.
	10.	1.	105.	-0.	1.
	15.	1.	130.	-0.	0.
	20.	1.	165.	-0.	0.
	30.	1.	20.	0.	0.
	40.	1.	45.	0.	0.
	50.	1.	10.	1.	0.

CANMAR BARGE BEAUFORT SEA SUMMER '75

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
14-08-75 22:30				
0.	41.	330.	36.	-21.
1.	39.	345.	37.	-10.
3.	38.	350.	37.	-7.
5.	30.	330.	26.	-15.
7.	26.	305.	15.	-21.
10.	18.	270.	-0.	-18.
15.	13.	330.	12.	-7.
20.	5.	100.	-1.	5.
25.	2.	175.	-2.	0.
15-08-75 00:05				
0.	33.	40.	26.	22.
1.	31.	35.	25.	18.
3.	26.	40.	20.	17.
5.	23.	20.	22.	8.
7.	10.	80.	2.	10.
10.	10.	140.	-8.	7.
15.	12.	320.	9.	-8.
20.	6.	260.	-1.	-6.
25.	2.	65.	1.	1.
15-08-75 02:00				
0.	27.	10.	27.	5.
1.	28.	10.	28.	5.
3.	20.	15.	19.	5.
5.	8.	20.	7.	3.
7.	18.	180.	-18.	0.
10.	10.	200.	-10.	-4.
15.	6.	5.	6.	1.
20.	4.	10.	4.	1.
25.	7.	20.	6.	2.
15-08-75 14:08				
0.	22.	130.	-14.	17.
1.	21.	130.	-13.	16.
3.	12.	130.	-8.	9.
5.	8.	150.	-7.	4.
7.	4.	165.	-3.	1.
10.	18.	120.	-9.	16.
15.	7.	320.	5.	-4.
20.	5.	210.	-4.	-3.
25.	4.	90.	0.	4.

CANMAR BARGE BEAUFORT SEA SUMMER '75

		DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
15-08-75	16:07					
		0.	14.	130.	-9.	11.
		1.	10.	130.	-7.	8.
		3.	10.	110.	-4.	10.
		5.	5.	110.	-2.	5.
		7.	3.	110.	-1.	3.
		10.	9.	135.	-7.	7.
		15.	3.	10.	3.	0.
		20.	2.	225.	-1.	-1.
		25.	5.	130.	-3.	4.
15-08-75	20:00					
		0.	14.	100.	-3.	14.
		1.	12.	100.	-2.	12.
		3.	12.	85.	1.	12.
		5.	18.	80.	3.	18.
		7.	13.	80.	2.	13.
		10.	3.	100.	-0.	3.
		15.	2.	110.	-1.	1.
		20.	10.	160.	-10.	4.
		25.	5.	180.	-5.	0.
15-08-75	22:30					
		0.	14.	110.	-5.	14.
		1.	18.	110.	-6.	17.
		3.	22.	95.	-2.	22.
		5.	21.	80.	4.	20.
		7.	21.	80.	4.	20.
		10.	15.	60.	8.	13.
		15.	3.	235.	-1.	-2.
		20.	8.	190.	-8.	-1.
		25.	11.	215.	-9.	-6.
16-08-75	00:15					
		0.	20.	130.	-13.	15.
		1.	22.	130.	-14.	17.
		3.	23.	130.	-15.	18.
		5.	26.	90.	0.	26.
		7.	25.	90.	0.	25.
		10.	16.	75.	4.	15.
		15.	7.	320.	5.	-4.
		20.	7.	230.	-4.	-5.
		25.	7.	270.	-0.	-7.

CANMAR BARGE BEAUFORT SEA SUMMER '75

DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
16-08-75 02:00				
0.	26.	150.	-22.	13.
1.	26.	140.	-20.	17.
3.	23.	130.	-15.	18.
5.	17.	100.	-3.	17.
7.	21.	185.	-21.	-2.
10.	14.	50.	9.	11.
15.	15.	340.	15.	-5.
20.	10.	275.	1.	-10.
25.	3.	10.	3.	1.

CANMAR BARGE VELMETER SUMMER 75-3

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
15-08-75 03:45	0.	39.	21.	37.	14.
15-08-75 14:07	0.	18.	149.	-15.	9.
15-08-75 14:50	0.	22.	146.	-18.	12.
15-08-75 15:34	0.	17.	150.	-15.	8.
15-08-75 16:05	0.	13.	152.	-11.	6.
15-08-75 17:50	0.	16.	105.	-4.	16.
15-08-75 20:00	0.	16.	112.	-6.	15.
15-08-75 20:40	0.	15.	101.	-3.	15.
15-08-75 21:35	0.	19.	107.	-5.	18.
15-08-75 22:30	0.	15.	114.	-6.	14.
16-08-75 00:10	0.	22.	106.	-6.	21.
16-08-75 02:00	0.	27.	108.	-8.	25.

CANMAR BARGE VELMETER SUMMER 75-3

	DEPTH	SPEED (CM/SEC)	DIRECTION	NS COMP (CM/SEC)	EW COMP (CM/SEC)
16-08-75 03:00	0.	22.	110.	-8.	21.
16-08-75 04:00	0.	21.	90.	0.	21.
16-08-75 05:00	0.	23.	82.	3.	22.
16-08-75 06:00	0.	21.	63.	9.	18.
16-08-75 08:00	0.	27.	62.	13.	24.
16-08-75 18:00	0.	31.	104.	-7.	30.
16-08-75 19:00	0.	36.	100.	-6.	35.
16-08-75 21:00	0.	35.	95.	-3.	35.
16-08-75 23:00	0.	33.	95.	-3.	33.

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SALINITY — — ITS DEFINITION AND CALCULATION

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SALINITY - ITS DEFINITION AND CALCULATION

by

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December 1976

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Foreword

The main problem in writing this study of salinity and its definition has been deciding what to leave out. There is a voluminous literature of considerable complexity concerned with the problem, written from a variety of viewpoints. A complete historical presentation of this material results in a formidable structure of interlocking deductions and circular arguments which prohibit that clear and ordered presentation of important concepts, which is the necessary preliminary to suggestions for reform. This paper is a report on our most successful attempt at route finding. It was not the only one, neither is the solution offered unique, but we think it the best. Although repetitious discussion has not been entirely avoided it has been reduced to a minimum by omitting that considered irrelevant to our main argument. Those wishing a wider perspective are referred to Walker (1976) and Yerofeyev, Ponomareva, & Ramazin (1975); we have had the latter paper translated from Russian, and it is available upon request.

E.L. Lewis

R.G. Perkin

December, 1976

ABSTRACT

Salinity data used to trace water movement or compute density are normally derived from measurements of chlorinity or electrical conductivity, temperature, and pressure. The latter technique has a precision about one order of magnitude greater than a typical chlorinity titration, but both are sensitive, in different ways, to variations in the ionic ratios of seawater. Present definitions of salinity are also ion-dependent causing significant variations in the salinity/density relationship which cannot be simply expressed. In order to obtain density to an accuracy commensurate with the available precision it is best to define salinity in relation to a water mass of known ionic content, so that a density correction to be applied to other water masses may be expressed as variations from a fixed standard. These corrections then appear in the form of simple additive constants for most waters and where density difference is the important parameter, no correction is necessary within a specific water mass. The new salinity definition is based on dilution by weight of a conductivity ratio labelled standard seawater. It would be invariant under compositional variations and in accord with the proposed new equation of state (Grasshoff, 1976). It is conservative within acceptable limits, would provide a "practical salinity scale" for use by oceanographers of all levels of sophistication, and greatly facilitate data comparisons between institutions. The present variety of computational procedures for in situ data reduction would be replaced by one set of definitive equations that would not be subject to change as the precision of physical or chemical measurement improved. A great part of the data base necessary to write these equations exists and the remainder should be available by 1978.

The Measurement of Salinity

Modern methods for the measurement of salinity depend on the simultaneous recording of electrical conductivity, temperature, and pressure. The present study arose from a request to provide a background paper on methods of salinity computation from such data with a recommendation for optimum procedure in the light of the recently suggested new equation of state for seawater (Grasshoff, 1976). After close examination of the problem it was concluded that a revision of the definition of salinity was necessary in order to eliminate ambiguities of greater magnitude than those associated with the equations or with instrumental error. As a first step in the argument, it is necessary to discuss in detail the methods presently used for data collection and reduction, with estimates of their accuracy.

Oceanic measurements are carried out utilizing an instrument commonly known as an "In situ CTD", the D referring to depth, which is a derived parameter so that "CTp" would be a better designation. Some instruments attempt to record salinity directly by making the conversion "CTp" to salinity internally using hard wired analog circuits, hence "STD". As was pointed out by Pingree (1970), this is undesirable for measurements of high accuracy, as far better compensation for errors in salinity reading may be obtained by applying the correction to the corresponding conductivity value. In situ CTD instruments are calibrated using a bench salinometer by making similar laboratory measurements at atmospheric pressure on water samples collected at the same time as the in situ readings are made. The conductivity of a particular parcel of water in the ocean is defined as C(S,T,p). An important parameter is the ratio between this conductivity and that of some standard seawater solution at a given temperature and pressure. The usual standard has been the conductivity of 35°/₀₀ seawater at a temperature of 15°C and atmospheric pressure, C(35,15,0), but there is nothing particularly important about this value, for example, Perkin and Walker (1972) in their formulation, have used C(35,0,0). Standard seawater from the North Atlantic, of known salinity very close to 35°/₀₀, historically known as "Copenhagen water", is available in sealed ampoules and is used to calibrate the bench instrument.

Manipulative techniques to arrive at a value of salinity from conductivity ratios vary, and the following discussion will be based on one such technique, that utilized by Cox, Culkin and Riley (1967). Similar arguments may be applied to all other techniques, for example, Bennett's (1976) formulation.

Define $$R_T = \frac{C(S, T, 0)}{C(35, T, 0)} \tag{1}$$

$$r_T = \frac{C(35, T, 0)}{C(35, 15, 0)} \tag{2}$$

$$R_{15} = R_T + \Delta_{15}(R_T, T) \tag{3}$$

and salinity $$S = F\ (R_{15}) \tag{4}$$

In a bench salinometer, the standard seawater and the sample are placed in the conductivity cell successively and the value of R_T is determined. In most bench salinometers it is specified that the temperature of the standard sea-

water and that of the sample should not differ by more than 3°C. An internal hard wired circuit compensates for this temperature difference which means knowing the functional form of r_T and applying it to the design of the circuitry. In some currently available bench salinometers (e.g. the Guildline Autosal) temperature compensation is not needed because all measurements are made in a constant temperature bath. The measured value of R_T is converted to R_{15} by knowledge of the form of equation (3), and then to a salinity by equation (4).

Very significant errors have occured in intercalibration experiments between institutions using bench salinometers. For example, Grasshoff and Hermann (1976) report on experiments conducted under the auspices of ICES using ampoules of Mediterranean and Baltic Sea waters. Although the reproducibility of measurements from a single instrument appeared to be good, values ranged ± .02°/₀₀ about the 38°/₀₀ approx. Mediterranean water and ± 0.05°/₀₀ about the 8°/₀₀ approx. Baltic water. These errors much exceed those attainable by careful use of equipment at one laboratory and set the accent for the present report; we are concerned with accuracy of measurement rather than precision. Intercalibration of measurements made by ships participating in a single large-scale operation may only serve to make errors systematic rather than to eliminate them. The only way to allow comparison of data taken at different times at the same location is to have a known standard of accuracy of measurement.

The calibration of the in situ machine first involves placing limits of accuracy on temperature and pressure measurements, as these are independent variables, in contrast to conductivity which is dependent on both of them as well as on salinity. When this has been done, the voltage, V, (or whatever other electrical analog is used) should be related to the conductivity ratio by means of a cell constant, K, according to

$$K \times V(S,T,p) = R = \frac{C(S,T,p)}{C(35,15,0)} \qquad (5)$$

where K may be a function of temperature and pressure in its own right due to dimensional changes of the cell. As the pressure and temperature are known, R may be replaced by R_T according to

$$\frac{R}{r_T}[1 + P(R, T, p)] = R_T \qquad (6)$$

where P(R, T, p) is the pressure dependence of conductivity ratio. R_T is solved for by an iterative process, from the value of R_{T^1} measured by the bench salinometer (at temperature T^1) by the use of equations (1) to (3) in an inverted form. R follows from (6) by a process of successive approximation. Hence the cell constant is determined. It is important to realize that in the above derivation there is no necessity to know the value of conductivity, conductivity ratio will suffice. Some authors' formulae corresponding to our equations (1) to (6) have utilized numerical values for C(35, 15, 0) (or other standard) in order to clarify their derivation which then disappears into the empirical coefficients of their data fit, but measurements of absolute conductivities are completely unnecessary for CTD data reduction purposes, a point that is not always appreciated, e.g., Knowles (1974). Typically, cell constants change little with time, and it is conventional to determine a "ΔS" as the correction to be applied to a narrow salinity range when in fact determination of ΔK is the proper procedure. The excellence or otherwise of in situ

equipment largely depends on the stability of ΔS as "ΔT" and "Δp" seldom give any problems, as sensors for these parameters tend to be more stable and/or easier of calibration. Thus, except for the pressure term, the data reduction method for both in situ and bench instruments is identical providing the same author's set of equations are utilized in both cases. The calibration procedure will compensate for undetected systematic errors over a narrow pressure, temperature, and conductivity range by forcing the in situ salinity to agree with the value determined by the bench salinometer. There may be an additional problem in the case of non-thermostated bench instruments which use temperature compensation circuits derived from an unknown equation.

In the above discussion, the definition of what is meant by salinity has been avoided. For the present it may be considered a measure proportional to the mass of salt per kilogram of solution. In fact, all practical attempts to measure salinity endeavored to produce a result corresponding to this definition, and most of the present difficulty regarding salinity measurements is due to failure to achieve this end. For example, measurements of electrical conductivity of a salt solution depend on the degree of ionization of the dissolved salts, whereas mass type measurements do not do so. Thus, the adequacy of conductivity to represent salinity would depend on the constancy of ionic ratios in seawater and on the absence of non-ionized compounds in samples taken from the world's oceans.

Only two recent bodies of experimental data are used to formulate equations of the types (1) to (4), that of Brown and Allentoft (1966), and that of Cox, Culkin and Riley (1967). The former authors took waters from various oceans having salinities in the range 33.5 $^{\circ}/_{\circ\circ}$ - 40.2 $^{\circ}/_{\circ\circ}$, and both diluted with distilled water and evaporated them to produce weight defined salinities in the range 0 to 60 $^{\circ}/_{\circ\circ}$. In each case they defined 35 $^{\circ}/_{\circ\circ}$ water as that having a conductivity ratio of unity with 35 $^{\circ}/_{\circ\circ}$ Copenhagen water, which does not necessarily mean that the mass of salt per kilogram of solution is the same in both cases. They investigated the changes in the conductivities of these solutions over 0 to 30°C, all measurements being taken at atmospheric pressure. The latter authors used natural waters and mixtures of natural waters taken from many parts of the world. For the lower and higher ranges of salinity, they used samples from the Baltic, Mediterranean and Red Seas. In all, they covered the range 2.5 to 41.5 $^{\circ}/_{\circ\circ}$, over temperatures 13.8°C to 28.7°C. The background to their work was discussions at meetings of the UNESCO sponsored "Joint Panel on the Equation of State of Seawater" in 1962 and 1963, UNESCO (1962-3). The desire was to obtain a representative relationship between density and conductivity suitable for general use. The International Tables, UNESCO (1966a), the standard body of information used to reduce bench salinometer data, is derived from this study and gives tabulated values equivalent to equations (1) to (4) at temperatures between 10°C and 30°C. Cox, Culkin and Riley (1967), used chemical titration to determine "Chlorinity" and thereby defined salinity, according to $S^{\circ}/_{\circ\circ} = 1.80655 C\ell^{\circ}/_{\circ\circ}$ the procedure used to standardize Copenhagen water. Discussion of this relationship will be delayed until the next section. The titration, which is a measure of the proportion of chlorine ions in solution, is a different function of the variation of ionic constituents than is electrical conductivity which may be changed by variation in any ion. Thus, the two parameters, chlorinity and conductivity are not necessarily compatible when deriving a quantity equivalent to mass of salt per kilogram of solution. Nevertheless, as the accepted standard "International Tables" do not go below 10"C, where most in situ measurements are made, it has been necessary to reach some accommodation between the two sets

of data [Brown and Allentoft (1966); Cox, Culkin and Riley (1967)] for CTD measurement reduction and Table 1 lists currently used formulations. With the exception of Rohde's use of Thomas, Thompson and Utterback (1934), other workers' data has been used only to obtain single point values of conductivity as it is usually too restricted in range to allow useful tabulation over the range of oceanic values or is significantly at variance with the International Tables. The major effect of these variations in composition and differences in parameter used to define salinity is to change the form of equation (4). The value of $\Delta_{15}(R_T,T)$ in equation (3) is not changed at a level of practical significance as has been shown indirectly by Bennett (1976) in his Tables 1 and 2.

The pressure correction term of equation (6) has been derived from the data of Bradshaw and Schleicher (1965) by all the authors listed in our Table 1. Values for the pressure correction are available over the range 0 to 10,000 decibars, 0 - 25°C, and 31-39°/₀₀. Brown (1974) compared readings of his in situ CTD at various depths with the corresponding bottle samples taken for calibration purposes. He found that values agreed within ±0.003 °/₀₀ from the surface down to 4,500 meters depth for about 75% of the samples taken, with apparently random scatter around a mean value indicating a normal statistical distribution of measurement error. Gascard (1973) computed vertical density gradients in the ocean from CTD readings using Bradshaw and Schleicher's pressure correction to give a Brunt Väisälä period of 4 hours and 37 minutes. A neutrally bouyant float placed at this level oscillated with periods between 4 hours 33 minutes, and 4 hours 36 minutes. As this frequency is most sensitive to density gradients, the result may be taken as a good indication of the adequacy of Bradshaw and Schleicher's correction. Professor W. Kroebel of the Institute of Applied Physics at the University of Kiel has indicated that measurements of the pressure coefficient of conductivity made in his laboratory confirm the results of Bradshaw and Schleicher (Private communication 1976). Thus, it would appear that the pressure correction data is good within its ranges and may be used with confidence. However, it would be desirable that the salinity range be extended to lower values, in order that the correction for Baltic and Arctic surface waters could be made without need for undue extrapolation. At 0°C the change in conductivity derived salinities is about 0.005°/₀₀ per 10 m depth increase.

At this stage it is important to consider what is a realistic standard for accuracy of CTD observations assuming an errorless data reduction, as this will aid in determining acceptable tolerances in the latter procedure. If the data reduction were perfect, and all waters had the same ionic concentration ratios, what would be the scatter introduced into the salinity readings by instrumental errors? Lewis and Sudar (1972) suggest that ±0.01°/₀₀ salinity is a suitable target. It was noted that to achieve absolute temperature accuracy of better than ±0.003°C in the ocean is difficult, and by itself this corresponds to about ±0.003°/₀₀ salinity uncertainty at low temperatures. The paper of Grasshoff and Hermann mentioned earlier indicates that the bench salinometer used for calibration purposes could produce errors far in excess of this: drift in the cell constant of the conductivity sensor is another factor. An overall figure for instrumental accuracy is very difficult to give as it depends on the frequency on which calibration is carried out. For example, Fofonoff, Haynes, and Millard (1974), using a WHOI-Brown CTD microprofiler quote an accuracy of ± 0.003 °/₀₀ salinity. The sensor assembly in this microprofiler is so small that it is feasible to insert both temperature and conductivity sensors simultaneously into a Dewar flask of Copenhagen water. The calibration procedure then compounds salinity errors due to inaccuracies in both temperature and con-

TABLE 1

DATA SOURCES OF EQUATION SETS USED FOR CTD MEASUREMENT REDUCTION

Equation Set	No. of Users	INFORMATION SOURCE (S) - same equation as data source, (R) - refit to data				
		Pressure Correction	Temp. dependence of 35°/₀₀ water	Correction to Cond. Ratio (Δ_{15})	$R_{15} \rightarrow S$	Other
International Tables (Unesco 1966)	8			C.C. & R. (S)	C.C. & R. (S)	
Perkin & Walker (1972)	7	B.&S. (R)	B. & A. (R)	B. & A. (R)	B. & A. (R)	Dauphinee for $T<1°C$, Reeburg (1965) for C(35,0,0)
Fofonoff et al (1976)	6	B.&S. (S)	B. & A. (S)	C.C. & R. (S)	C.C. & R. (S)	
Bennett (1976)	5	B.&S. (R)	B. & A. (R)	C.C. & R. & B. & A. (R)	C.C. & R. (S)	Dauphinee for low temperat-ure
Gascard (1970)	1	B.&S. (S)	B. & A. (S)	C.C. & R. (S)	C.C. & R. (S)	Weyl (1964) for C(35,15,0)
Jaeger (1973)	1	B.&S. (S)	B. & A. (R)	B. & A. (S)	B. & A. (S)	
Zaburdaev et al. (1969)	1	B.&S. (S)	B. & A. (R)	C.C. & R. (S)	C.C. & R. (S)	Weyl (1964) for C(35,15,0)
Accerboni & Mosetti (1967)	1		B. & A. (R)	C.C. & R. & B. & A. (R)	C.C. & R. & B. & A. (R)	
Rohde	1	B.&S. (R)	T.T. & U.	T.T. & U.	T.T. & U.	

(Cont'd)

TABLE 1 (Cont'd)

Equation Set	No. of Users	INFORMATION SOURCE (S) - same equation as data source, (R) - refit to data				
		Pressure Correction	Temp. dependence of 35°/₀₀ water	Correction to Cond. Ratio (Δ_{15})	$R_{15} \rightarrow S$	Other
Ribe-Howe (1975)	1	B.&S. (R)	B. & A. (R)	C.C. & R. (R)	C.C. & R. (R)	
Fedorov (1971)	1	B.&S. (R)	B. & A. (R)	C.C. & R. (S)	C.C. & R. (S)	
Crease (unpublished)	1	B.&S. (R)	B. & A. (R)	B. & A. Unpublished	C.C. & R. (S)	
Thomas, Thompson & Utterback (1934) Bradshaw and Schleicher (1965)	1	B.&S.	T.T. & U. (S)	T.T. & U. (S)	T.T. & U. (S)	

B. & S. is Bradshaw & Schleicher (1965)

B. & A. is Brown & Allentoft (1966)

C.C. & R. is Cox, Culkin & Riley (1967)

T.T. & U. is Thomas Thompson & Utterback (1934)

ductivity measurement into a single factor smaller than that obtained by consideration of each parameter separately but less easily extrapolated to other conductivities and temperatures. The small conductivity cell poses another potential problem due to deposited material for, as Brown himself points out (Brown 1974), the conduction cells have been observed to drift at rates of the order 0.0005 ‰ per hour of immersion. It is emphasized that for this study comparison of results between different institutions working at different times is the objective, rather than the accuracy achieved on one operation from a given institute using a particular series of observers. We maintain that this "inter-institutional accuracy" can have a realistic target of ± 0.01 ‰.

Salinity and Density

There is a confusion in the oceanographic literature regarding density, ρ, specific gravity, d, and "density anomaly", σ, which is really a "specific gravity anomaly". Measurements made on the "density" of seawater at atmospheric pressure and temperature T, obtain a specific gravity giving the ratio of density of seawater to that of pure water at a fixed temperature - that of its maximum density. $d_T = \rho_T/\rho_{max}$. Knudsen's (1901) "Density" Tables are in fact specific gravity tables, but as the maximum density of fresh water, ρ_{max}, has been taken as unity they are equivalent to density values. Recent work has altered the value ascribed to ρ_{max} which is a function of isotopic content (Girard and Menaché 1971), and this led to apparent errors and confusion in making data comparisons (Wilson 1975). We do not agree with his criticism (p388§3) of Kremling's work. In this paper σ only is considered which at temperature T is defined as

$$\sigma_T \equiv (d_T - 1)\ 10^3$$

Because σ_T is a difference measurement it is numerically equal to density difference for all practical purposes and to conform to common usage will be referred to as a "density anomaly" or "density".

As a parameter describing the ocean, salinity is of use as a conservative property and as a route to density through an equation

$$\sigma_T = F\ (S,\ T) \qquad (7)$$

σ_T itself is usually of less importance than $\Delta\sigma_T$, as nearly all dynamic calculations involve the latter quantity. One of the few occasions where density itself is required is in the design of neutrally bouyant floats.

The initial definition of salinity due to Forch, Knudsen, Sørensen (1902) was "the amount of solid material in grams contained in one kilogram of seawater when all the carbonate has been converted to oxide - all the bromine and iodine replaced by chlorine, and all the organic material oxidized". The conversions mentioned were necessitated by the difficulty of performing a salinity measurement by evaporation. The authors also suggested a practical alternative to this tedious process. A titration was performed to measure the chlorinity which, in later years, was eventually defined in terms of the weight of pure silver required to precipitate all the ions having insoluble silver salts in a fixed mass of seawater. It represents, approximately, the concentration of the chlorine ion in the water. On the basis of comparison of nine

mass measurements of salinity and of the titrated chlorinity determination, Knudsen proposed a relationship for salinity

$$S_k\ °/_{oo} = 0.03 + 1.805Cl\ °/_{oo} \qquad (8)$$

For many years this equation was used as a definition of salinity and as chlorinity is definitely a conservative property, this definition forced salinity not to be so.

Titration for chlorinity determination is a highly skilled routine and in the hands of the average operator it is less precise estimation of salinity than values derived from electrical conductivity. Farland (1975) reporting on the salinity intercomparison in the range 32 - 38 $°/_{oo}$ among the thirty-one ships taking part in the GARP Atlantic Tropical Experiment, differentiates between the standard deviation in the salinity of samples determined by titration, non-thermostated bench salinometers, and thermostated bench salinometers with the result shown in Table 2. This table also lends further support to the contention that ± 0.01 $°/_{oo}$ is a reasonable target for in situ salinity measurement. Calibration procedures using the non-thermostated bench salinometers would typically have given errors exceeding that figure.

A result of the work of Cox, Culkin and Riley (1967) on electrical conductivity of seawater, was a paper "Redefinition of Salinity" by Wooster, Lee and Dietrich (1969), representing SCOR, ICES, and IAPSO respectively; in which Knudsen's definition of salinity in terms of chlorinity was replaced by a definition of salinity in the form of equation (4). Namely

$$S\ °/_{oo} = -0.08996 + 28.29720\ R_{15} + 12.80832\ R_{15}^2 \qquad (9)$$

$$-10.67869\ R_{15}^3 + 5.98624\ R_{15}^4 - 1.32311\ R_{15}^5$$

An integral part of this definition was the acceptance of

$$S_c\ °/_{oo} = 1.80655Cl\ °/_{oo} \qquad (10)$$

which had been used by Cox et al. to convert the chlorinity-conductivity relation which they derived from their experimental values into a salinity-conductivity relationship.

Thus the discussion of salinity and density is complicated by there being a number of definitions of salinity extant which are mutually incompatible at the level of accuracy of interest. We suggest that a useful definition of salinity must achieve the following ends:

1) be reproducible in any major laboratory throughout the world irrespective of the ionic content of the local waters
2) must be a conservative property
3) must allow density differences in any given water mass to be computed to acceptable limits.

It is interesting to examine existing definitions in this light. S_k, Knudsen's salinity, is in fact a derived parameter based upon a chlorinity standard, that of Copenhagen water. Although Knudsen measured both mass defined salinity and chlorinity, subsequent use of his formula has always been to determine salinity from a chlorinity measurement, or equivalent R_{15} measurement,

TABLE 2

Analysis of Salinity Measurements

from GATE Vessels

(After Farland [1975])

Measurement Type	Number of Measurements	Data Observed Within ±0.01 °/₀₀ (Percent)	Standard Deviation of Type °/₀₀
Titration	143	31	0.0233
Non-Thermostated	370	61	0.0112
Thermostated	47	100	0.0023

standardized with Copenhagen water. Lyman and Fleming (1940) published their recalculation of the analysis of seawater given by Dittmar (1884) in terms of more modern values for atomic weights and calculated the mass of salt per kilogram of seawater. They then modified it to account for the conversion of iodine and bromine to chlorine etc. etc. and substantiated the results of Knudsen at around 34 °/₀₀ lending support to his equation. S_k is not a conservative property.

S_c, the Cox salinity, is once again a derived parameter based upon the determination of chlorinity by titration. It is defined by equation (10) which was the result of the recommendation of the joint panel on oceanographic tables and standards (UNESCO 1966b). S_c is identical to S_k at 35 °/₀₀, and is a conservative quantity. S_c is also defined in terms of R_{15} according to equation (9), but the fact that all salinometer measurements utilizing this equation depend on a data base relating R_{15} to chlorinity with Copenhagen water as a standard, forces an approach to S_c through a chlorinity intermediary.

The constant, 0.03, in the definition of S_k results from Knudsen's use of Baltic Sea waters for experiments on lower salinities. These Baltic Sea samples contain a significant river contribution whose salts bear a different ratio to the chlorine ion concentration than does, say, Atlantic seawater diluted to the same mass of salt per kilogram of solution. Various rivers contain widely different ratios of salts and Knudsen's equation is one particular example of general equation

$$S = A + BC\ell \qquad (11)$$

which is applicable to all coastal situations. Table 3 gives values of "A" and "B" that have been found appropriate in various coastal or enclosed areas. S_c

TABLE 3

VALUES OF COEFFICIENTS

IN THE RELATIONSHIP $S = A + BC\ell$

Location	A	B	Source
Baltic	.03	1.805	Knudsen (1902)
Baltic	+.073	1.8022	Lyman & Fleming (1940)
Black Sea	.1856	1.7948	*Nikitin, Kondratyev, Yuryev (1955)
Azov Sea	.230	1.792	*Tsurikova (1960)
Baltic	.115		*Zarins & Ozolins (1935)
Gulf of Riga	.130		*Zarins & Ozolins (1935)
Zurskiy Zaliv	.250		*Yuryavichyus (1961)
Baltic	.123	1.800237	Millero & Kremling (1976)

+Calculated from $\frac{\Sigma\ °/_{\circ\circ}}{1.00488} = A + BC\ell$ where Σ is the sum of major ion masses as given by the authors.

*as quoted by Tsurikova and Tsurikov (1971)

would only be appropriate if the runoff from the land were almost pure unmineralized water, whereas the $S = F(R_{15})$ relationship of equation (9) contains data from dilution with a wide variety of water types. Thus equations (9) and (10) are not compatible under conditions of constituent variations. The densities derived from salinities defined this way clearly vary from location to location and indeed from time to time as has been shown in the case of the Baltic by Millero and Kremling (1977).

Further discussion required a distinct non-varying definition of salinity, and with hindsight we will define salinity from the ratio resulting from dilution or evaporation by weight of Copenhagen water whose initial salinity is derived from either equation (8) or (10). The dilutant is pure water. At this stage all that is required is to produce a constancy regarding chemical composition so that salinity can have a fixed meaning in respect to density. The use of either of the two equations mentioned is not important and, as will be seen later, we hope to shift the definition for a standard salinity from a

chlorinity titration to an electroconductivity measurement. It would be desirable that salinity be a direct measure of the total mass of salt per kilogram of solution, but for historical reasons it is necessary to preserve the iodine and bromine conversion to chlorine, carbonate to oxide, and oxidation of organic material. For Copenhagen water diluted with distilled water, Millero (1976) has given

$$S_A = 1.00488S \tag{12}$$

where S_A is the true mass of salt per kilogram of solution and will be termed the absolute salinity. S is now called the "practical salinity" to produce a situation analogous to the absolute and practical temperature scales, an approach first suggested to the authors by A.S. Bennett of the Bedford Institute of Oceanography. Copenhagen water takes the place of the triple point of water as having a standard value by definition. The question immediately arises how to define S for water masses that are not equivalent to Copenhagen water and its dilutions in ionic content. In theory it is possible to take any easily measured parameter and define S for that water mass as the same as that of diluted Copenhagen water having the same value of this parameter. Chlorinity, electrical conductivity, sound velocity are immediate candidates, but the best resolution and stability available in present field instrumentation is probably electrical conductivity. Both the latter quantities however, require information on temperature and pressure in order to derive a salinity whereas chlorinity is an independent variable. At the moment there is insufficient data available on sound velocity measurements in different water masses to present a study of the effects upon density of measuring S using this parameter.

If chlorinity is used as the measured quantity, S of the sample will equal S_c. If electrical conductivity is used, the sample salinity may not be given by equation (9) because of compositional variations. However, Brown and Allentoft's work on the electrical conductivity of seawater contains observations on weight diluted/evaporated samples from the North Atlantic, the source of Copenhagen water, and their data could be used to give a new relationship connecting S with R_{15}. In addition, Millero, Gonzalez, and Ward (1976) have published a formula based on measurements of weight diluted Copenhagen water and state that the salinities determined from this equation are within ± 0.003 °/₀₀ of those of Brown and Allentoft (1966). They give the equation

$$\begin{aligned} S = {} & 27.25861\, R_{15} + 19.06186\, R_{15}^{2} \\ & -27.23835\, R_{15}^{3} + 27.09961\, R_{15}^{4} \\ & -14.19791\, R_{15}^{5} + 3.01619\, R_{15}^{6} \end{aligned} \tag{13}$$

analogous to equation (9). The effects of using one equation to compute σ_T for all water samples will now be investigated to the extent that existing data will allow. Table 4 shows the properties of Copenhagen water and its dilutions by weight at zero degrees centigrade. The chlorinity values in column (1) are in direct proportion to the weight dilution ratio: so are the salinities, column (2). Values for R_{15} are taken from equation (13). The fourth column is calculated from Millero, Gonzalez and Ward (1976) who determined densities of weight diluted Copenhagen water. An equivalent table could be constructed at any temperature, the change being in column (4) only.

Suppose the chlorinity and conductivity ratio at 0°C of a sample from the Baltic sea is determined experimentally. Its salinity would then be determined from Table 4 by ascribing either the same chlorinity or conductivity to diluted Copenhagen water. Table 5 shows the results of making each of these two assumptions in turn. For Baltic water, chlorinity and conductivity ratio are no longer connected as they are in Table 4, and thus the effect on σ_T must be considered separately. Values of chlorinity and R_{15} from Table 4 in the appropriate salinity range for Baltic waters have been taken as standard test values and available density data has been interpolated in order to make the comparison. Millero and Kremling (1977) measured the densities of Baltic Sea water and performed a chlorinity titration on each sample which is the basis of column (2) of Table 5. Column (3) is the result of subtracting from these density values those for Copenhagen water having the same chlorinity. Cox, Culkin and Riley (1967) determined the chlorinity to conductivity ratio relationship for a number of Baltic Sea samples, and this data can be interpolated to relate the R_{15} values of Table 4, to the chlorinity of Baltic water. Millero and Kremling's equation relating chlorinity to density may then be used to obtain column (5). These authors showed that differences between values predicted by this equation and the experimental values showed a random scatter. As the standard deviation is approximately twice the precision of the measurement, it was considered that compositional variations in Baltic Sea waters must account for the variance. Column (6) shows the density difference between these samples and Copenhagen water with the same R_{15}. In Tables 6 and 7, a similar procedure is carried out for waters from the North Atlantic Ocean and North Pacific Ocean, using the results of Millero, Gonzalez, Brewer and Bradshaw (1976). Although only one standard R_{15} value is given because of the small range of salinities available from these authors' work, readings taken on eight different samples from each water mass are available, allowing calculation of the deviations shown. Table 8 makes comparison for Red Sea water using the data of Cox, McCartney and Culkin (1970), allied to that of Cox, Culkin and Riley (1967). For Table 9, Mediterranean waters, the data of Morcos and Riley (1966) has been combined with that of the previous authors. These tables encompass most of the recent experimental density data available. Comparisons of these data with Knudsen's indicate that his densities are too low by an average of about 0.010 units (equivalent to 0.012 °/$_{\circ\circ}$ salinity at 0°C) Millero, Gonzalez and Ward (1976).

Table 5 indicates that if the electrical conductivity route to density is taken, it is possible to specify a standard density correction, $\Delta\sigma \sim 0.034$, to be applied to the calculated results independent of temperature. For density difference measurements, which are usually of far greater interest than the density itself, no correction would be necessary within the ± 0.01°/$_{\circ\circ}$ salinity which we consider to be a realistic experimental accuracy. Baltic waters are the only ones for which such an extensive data comparison is available. Data from the North Atlantic and deep Pacific (Tables 6 and 7), though inadequate to produce a firm conclusion, appears to allow a similar density correction to be made. The deep Pacific water correction, $\sim$ 0.016, is due to the fact that these waters possess a greater concentration of silicon and have a higher alkalinity than North Atlantic waters, which approximate to the Copenhagen water standard. The silicon exists as $Si(OH)_4$ which does not ionize in solution and thus tends to make the water "heavier" without increasing its electrical conductivity. Table 9 shows that there is a considerable difference between average Mediterranean waters and those in the vicinity of the Nile outflow. Away from the coast all salinities reported lay between 21 and 21.7 °/$_{\circ\circ}$ chlorinity. These waters do not really require a density correction whilst those near the coast could be improved by adding 0.020 to the calculated figure.

TABLE 4

PROPERTIES OF COPENHAGEN WATER

DILUTED WITH DISTILLED WATER AT 0°C

Chlorinity $C\ell$	Salinity by Weight S	Conductivity Ratio R_{15}	Density Anomaly σ_o
1.	1.807	.06368	1.346
2.	3.613	.12354	2.815
3.	5.420	.18089	4.280
4.	7.226	.23647	5.741
5.	9.033	.29073	7.201
6.	10.839	.34398	8.658
7.	12.646	.39640	10.115
8.	14.453	.44812	11.570
9.	16.259	.49921	13.026
10.	18.066	.54972	14.480
11.	19.872	.59970	15.935
12.	21.679	.64917	17.390
13.	23.485	.69815	18.845
14.	25.292	.74665	20.301
15.	27.098	.79469	21.757
16.	28.905	.84230	23.213
17.	30.711	.88950	24.671
18.	32.518	.93630	26.129
19.	34.324	.98273	27.587
20.	36.131	1.02880	29.047
21.	37.938	1.07454	30.508
22.	39.744	1.11994	31.970
23.	41.551	1.16501	33.433
24.	43.357	1.20974	34.897
25.	45.164	1.25410	36.362
19.3739	35.000	1.00000	28.133

$S = 1.80655\ C\ell$

$R_{15} \rightarrow S$ from Millero, Gonzalez & Ward (1976)

$\sigma_o = \sigma_o(S,0)$ from Millero, Gonzalez & Ward (1976)

TABLE 5

DENSITY AND DENSITY CORRECTION

FOR BALTIC WATER

T=0°C

$C\ell$	σ_o	$\Delta\sigma_o$	R_{15}	σ_o	$\Delta\sigma_o$
1.	1.431	.085	.06368	1.389	.043
2.	2.893	.077	.12354	2.862	.047
3.	4.352	.072	.18089	4.323	.043
4.	5.811	.069	.23647	5.779	.038
5.	7.268	.067	.29073	7.233	.033
6.	8.724	.066	.34398	8.688	.030
7.	10.179	.065	.39640	10.144	.030
8.	11.634	.064	.44812	11.601	.031
9.	13.088	.062	.49921	13.059	.033
10.	14.541	.060	.54972	14.516	.036
11.	15.993	.057	.59970	15.973	.038
12.	17.444	.054	.64917	17.429	.039
13.	18.895	.050	.69815	18.883	.038
14.	20.345	.045	.74665	20.336	.035
	Average =	.064		Average =	.037
	Std. Dev. =	±.011		Std. Dev. =	±.005

T=5°C

$C\ell$	σ_5	$\Delta\sigma_5$	R_{15}	σ_5	$\Delta\sigma_5$
1.	1.523	.085	.06368	1.481	.044
2.	2.953	.078	.12354	2.923	.048
3.	4.382	.073	.18089	4.353	.045
4.	5.810	.070	.23647	5.779	.039
5.	7.236	.067	.29073	7.203	.033
6.	8.662	.064	.34398	8.627	.029
7.	10.087	.062	.39640	10.053	.027
8.	11.512	.059	.44812	11.480	.027
9.	12.935	.055	.49921	12.907	.027
10.	14.358	.051	.54972	14.334	.027
11.	15.781	.046	.59970	15.761	.027
12.	17.202	.041	.64917	17.187	.026
13.	18.623	.034	.69815	18.612	.022
14.	20.044	.026	.74665	20.035	.017
	Average =	.058		Average =	.031
	Std. Dev. =	±.017		Std. Dev. =	±.009

(Cont'd)

TABLE 5 (Cont'd)

T=10°C

$C\ell$	σ_{10}	$\Delta\sigma_{10}$	R_{15}	σ_{10}	$\Delta\sigma_{10}$
1.	1.232	.086	.06368	1.191	.045
2.	2.638	.080	.12354	2.608	.051
3.	4.042	.076	.18089	4.014	.048
4.	5.446	.074	.23647	5.415	.043
5.	6.848	.071	.29073	6.815	.038
6.	8.250	.069	.34398	8.216	.035
7.	9.651	.067	.39640	9.617	.033
8.	11.052	.064	.44812	11.020	.033
9.	12.452	.060	.49921	12.423	.033
10.	13.851	.056	.54972	13.827	.033
11.	15.249	.051	.59970	15.230	.032
12.	16.648	.045	.64917	16.633	.030
13.	18.045	.038	.69815	18.034	.026
14.	19.442	.029	.74665	19.433	.020
	Average =	.062		Average =	.035
	Std. Dev. =	±.016		Std. Dev. =	±.008

$R_{15} \rightarrow C\ell$ from Baltic data of Cox, Culkin & Riley (1966)

$C\ell \rightarrow \sigma_T$ (Baltic waters) by method of Millero & Kremling (1977)

TABLE 6

DENSITY AND DENSITY CORRECTION FOR

NORTH ATLANTIC WATERS BELOW 600m

$C\ell$	σ_{25}	$\Delta\sigma_{25}$	R_{15}	σ_{25}	$\Delta\sigma_{25}$
19.3739	23.378	0.003	1	23.378	0.003±0.004

$C\ell \rightarrow R_{15}$ (Deep N. Atlantic) from Cox, Culkin & Riley (1966)

$R_{15} \rightarrow \sigma_{25}$ from Millero, Gonzalez, Brewer & Bradshaw (1976)

TABLE 7

DENSITY AND DENSITY CORRECTION FOR

DEEP PACIFIC WATER BELOW 1204m

Cℓ	σ_{25}	$\Delta\sigma_{25}$	R_{15}	σ_{25}	$\Delta\sigma_{25}$
19.	22.884	0.020	0.98273	22.879	0.016±0.005

$C\ell \rightarrow R_{15}$ from deep Pacific data of Cox, Culkin & Riley (1966)

$R_{15} \rightarrow \sigma_{25}$ from Millero, Gonzalez, Brewer & Bradshaw (1976)

TABLE 8

DENSITY AND DENSITY CORRECTION FOR

THE RED SEA

Cℓ	σ_{20}	$\Delta\sigma_{20}$	R_{15}	σ_{20}	$\Delta\sigma_{20}$
22	28.393	-0.028	1.11994	28.403	-0.019
23	29.769	-0.037	1.16501	29.784	-0.022

$C\ell \rightarrow R_{15}$ from data of Cox, Culkin & Riley (1966)

$R_{15} \rightarrow \sigma_{20}$ from equation of Cox, McCartney & Culkin (1970)

N.B. Their raw Red Sea data shows a scatter (possibly the result of compositional variations) which prevents fitting it to the desired accuracy. Thus their full $\sigma = F(R_{15},T)$ equation, the result of all the data taken by the authors from a variety of waters has been used. Thus the values for $\Delta\sigma$ given are only relative.

TABLE 9

DENSITY AND DENSITY CORRECTION FOR

NILE / MEDITERRANEAN

$C\ell$	σ_{20}	$\Delta\sigma_{20}$	R_{15}	σ_{20}	$\Delta\sigma_{20}$
15	18.827	0.053	0.79469	18.785	0.010
16	20.210	0.062	0.84230	20.173	0.025
17	21.588	0.065	0.88950	21.556	0.033
18	22.961	0.061	0.93630	22.934	0.034
19	24.330	0.052	0.98273	24.307	0.029
20	25.695	0.038	1.02880	25.677	0.020
21	27.054	0.015	1.07454	27.042	0.003
21.7	28.003	-0.003	1.10635	27.996	-0.010

Morcos & Riley (1966) give measured values $C\ell$, R_{15}, and σ_T, for Nile estuary waters in the range $14.9<C\ell<21.8°/_{\circ\circ}$. These have been combined with values given by Cox, Culkin and Riley and Cox, McCartney and Culkin at $C\ell$'s $\sim 21.7°/_{\circ\circ}$ for Mediterranean waters. This data has been brought to the same temperature (20°C) by Cox, McCartney and Culkin's equation for $\sigma_T(T)$ and a quadratic fit was made to represent $\sigma_{20} = \sigma_{20}\ (C\ell)$ and $\sigma_{20} = \sigma_{20}(R_{15})$. In this process one of the points of Morcos and Riley (1966) was discarded because of a residual five times the standard deviation.

Such other data that exists, e.g., Thompson and Wirth (1931), has been rejected due to its incompatibility with the results of other authors. Fofonoff and Bryden (1975) have commented on this point. Tables 5 - 9, though indicative, are insufficient to reach any final conclusion on the effectiveness of correcting for compositional variations by adding a density correction to the results of using a standard equation based upon Copenhagen water and its dilutions. Fortunately, density calculations based on chemical analyses provide further evidence.

There have been a number of attempts to calculate density differences resulting from the non-constant composition of seawater from knowledge of partial molal volumes of the various constituents and their partial equivalent conductance. Brewer and Bradshaw (1975), after pointing out that the relative concentration of the major ions in oceanic seawater is constant within analytic error, state that the density variations in oceanic waters at the same salinity often

relate to calcium carbonate dissolution and the concentration of dissolved silica. The effects of the former factor may be described in terms of the total alkalinity of the seawater solution and its concentration of carbon dioxide, in an ocean that is generally saturated with calcium carbonate. Brewer and Bradshaw, using values for partial volumes and conductances supplied by other authors, calculated the changes in density to be expected per unit change in alkalinity, CO_2 concentration, and silicon hydroxide concentration producing a formula which could be applied to chemical oceanographic data available from the GEOSECS program to produce a calculated density anomaly. These calculations were substantiated by comparison with experiments of Millero, Gonzalez, Brewer and Bradshaw (1976), for the case of deep North Pacific water, the results from which are incorporated in our Table 6. They also improved Brewer and Bradshaw's formula, using more modern values for some of the constants involved in its derivation and included an extra term for nitrate concentration. Originally, Brewer and Bradshaw (1975) predicted a density correction of between -0.0003 and + 0.006 σ_T units for equatorial Atlantic waters from the surface down to 5,000 meters, a density correction of between 0.004 and 0.0075 σ_T units for Antarctic waters down to 6,500 meters, and a correction between 0.003 and 0.012 σ_T units for North Pacific waters down to 7,000 meters. As has already been noted, this last figure has been changed upward to an average value of 0.016 units for the deep North Pacific by experiment, and there appears to be a good agreement with the modified Brewer/Bradshaw equation. Except in extraordinary cases, such as the Red Sea brines (salinities in excess of 200 °/₀₀), as reported by Connors and Kester (1974), it is probable that for oceanic purposes most density corrections are to be based on the calcium carbonate system allied to local silicon concentrations. These anomalies are important when the movement of water on a global scale is being considered from a region of one density correction to that of another so that the isopycnal surfaces as calculated from the standard equation must be adjusted differently at the two locations. However, it would still appear possible to apply one correction only to a given hydrographic cast within the limits of accuracy attainable (± 0.01 °/₀₀). It is to be emphasized that the precision of the measurement and its resolution may be higher than this so that on a given cruise, vertical density gradients may be measured at a higher level of accuracy.

The situation for the estuaries is quite different as relative concentrations of the major ions are not necessarily constant, the Baltic being an estuary in this context. Experimental determinations of density have been utilized herein to illustrate the situation, but as the waters concerned are usually shallow, the effects, in terms of oceanographic sections, are much smaller proportionately, and indeed, far less precision is usually called for in terms of salinity measurements. Another factor is that suspended materials in the water may make the interpretation of conductivity data very difficult, so that uncertainties may arise of greater significance than those due to compositional variations. Estuarial waters are a mixture of seawater and the outflow from the local river system. Thus, the total mass of salts per kilogram of solution is made up from two distinct bodies of waters with different ionic ratios. Both of them will contribute to the density and conductivity of the resultant mixture. In a review paper, Millero (1975) has considered compositional data on river waters throughout the world and has applied it to calculations of the density of estuarial mixtures. He reached the conclusion that waters containing the same total mass of salt per kilogram of solution would have the same density within experimental error throughout a wide range of proportions of the two water masses. Thus, if S_A, the total mass of salt per kilogram of solution were known independently, this value converted to S by equation (12) could be applied to the

standard density equation to yield acceptable results. The experimental work of Millero, Lawson and Gonzalez (1976) confirmed this statement for an estuary where the river waters have a composition close to the world average. Other calculations were carried out by Connors and Kester (1974) on the effects of diluting seawater to the same S_A from 35 to 30 °/₀₀ approx. with waters from the Amazon, Mississippi, Yukon, and Rio Grande respectively. Their results support Millero's contention in that the density correction is only a few parts per million except in the case of the Rio Grande which contains a fifty-times excess proportion of bicarbonate ions in its waters compared to the proportions of "normal" seawater.

We attempted to make use of the data of Morcos and Riley (1966) to provide further evidence that densities of waters with the same S_A were the same at the same temperature, but it was concluded that the scatter in their experimental data for the determination of gravimetric salinity coupled to uncertainties in how to compute S_A from this quantity does not allow proper comparison.

Thus, the existing evidence indicates that if electrical conductivity were a suitable parameter with which to label the total salt content of the water mass, it could be utilized to compute density without bothering about compositional variations. This would be equivalent to stating that the S derived from R_{15} by equation (13) would equal S derived from S_A by equation (12) for all water masses and the density corrections given in Tables 5 - 9 have already shown that this is not exactly true. Given a value for R_{15}, one can proceed to salinity, S, as we have defined it by equation (13) for all water masses, and progress to a value of σ from the new equation of state. A correction is then applied from tables dependent on the constitution of that particular water mass. An alternative representation would be to rewrite the equation of state in terms of S_A instead of S when, except in a very few cases such as Red Sea brines and offshore of the Rio Grande, it is probable that no $\Delta\sigma$ correction would be needed. This would be equivalent to replacing 1.000488S by looking up a form $\mu + \varepsilon S$ for S_A from tables before entering the density equations. The former route, namely, $R_{15} \rightarrow S \rightarrow \sigma \rightarrow \sigma + \Delta\sigma$ is preferred rather than $R_{15} \rightarrow S \rightarrow S_A \rightarrow \sigma$, as potential changes in μ and ε due to improved analyses at a later date would involve recomputation of densities.

Theoretical calculations have been carried out by Millero (1975) on variations in electrical conductivity at infinite dilution between the mixture of ions that can be designated as average river salt and sea salt respectively. Infinite dilution is considered because the increment of conductivity associated with the addition of a particular ion is dependent on the other components at any finite concentration. This yields a ratio of about 10:13 for conductivities river salt:sea salt. If it is assumed that the form of the equation allowing computation of conductivities is unaffected by finite concentrations of the other ions, then it is possible to compute a curve of equivalent conductance versus concentration which indicates that the conductivity of seawater and riverwater with equal S_A are essentially the same at salinities in excess of 7°/₀₀. These calculations require further substantiation by experimental work. Nevertheless, it appears clear that major sources of error in using conductivity-determined salinities in a seawater density equation are going to occur at very low salinities which are usually confined to surface layers. Exceptions are waters that can be classified as evaporated estuaries.

The above mentioned work of Connors and Kester (1974) considered the density correction to be applied at 30 °/₀₀ to mixtures of standard seawater with the outflows of the rivers named, if conductivity were used as the density computing parameter. This constitutes a calculated version of experimental results similar to those given in Tables 5 - 9. They found a density correction for Amazon dilution of 0.005 σ_T units in the temperature range $0 \leq T \leq 25°C$, 0.015 units for Mississippi dilution, 0.020 units for Yukon dilution and 0.041 for Rio Grande dilution.

To summarize: - it appears that a definition of salinity based upon R_{15} as a function of dilution by weight of standard seawater, may be used to calculate density differences between oceanographic stations in a given sea without need for correction in most cases where an accuracy of ± 0.01 °/₀₀ may be ascribed to the measurement. When σ_T itself is required, it is necessary to add a constant to the computed value which will vary from one geographic location to another. The total weight of salts per kilogram of solution may be calculated from $S_A = \mu + \varepsilon S$ where ε is a constituent dependent constant and for most cases $\mu = 0$ at an acceptable level of accuracy due to the ability of a conductivity measurement to record ionic content irrespective of the particular ionic ratios. A major difficulty in the past, using the salinities defined according to equation (9), has been the inability to know these corrections because of the near impossibility of relating a given water mass to the mixture of water masses that gave rise to that equation.

The Calculation of Salinity and its Standardization

A mail survey of techniques used for in situ CTD data reduction was carried out with letters being sent to major world oceanographic institutions selected from the International Directory of Marine Scientists (FAO 1970). Thirty-two replies were received and a listing of popularities for the various equations is given in column (2) of Table 1; some institutes used more than one equation. The geographical uneveness of the reply pattern makes further analysis unprofitable except to note that eight institutes used the International Tables or equivalent to apply a salinity correction to STD readings where the equivalent of equations (1) to (4) is hard wired circuitry. The undesirability of recording in situ data in the form of salinities and applying corrections in this manner has already been mentioned. Variations in calculated salinities resulting from the use of these equations have been investigated in detail by Walker & Chapman (1973) and Walker (1976). If, for example, a salinity of about 30 °/₀₀ were computed by entering the same data into all these equations, the answers could vary by up to 0.02 °/₀₀. If the comparison is restricted to recent equations of superior quality, variations of up to 0.005 °/₀₀ might be expected at 10°C and a pressure of 1000 db. To computational variations of this type must be added uncertainties associated with the measurement itself, and if the output of data from major oceanographic institutions is considered as a whole, it is unlikely that readings can be compared to better than ± 0.03 °/₀₀; ± 0.02 °/₀₀ if those institutions which appear unaware of the intricacies of the problem are excluded. Clearly the time is ripe for one, and only one definition of salinity, and a fixed computational procedure for its derivation from conductivity/temperature/pressure. Unfortunately the quality of the data from which the equations of Table 1 are derived is seriously suspect. Dauphinee and Klein (1977) have performed a new series of measurements on the temperature dependence of the conductivity of Copenhagen water and have compared this to the corresponding values given by Brown and Allentoft (1966) which are used as a data base in all

the equations listed except that of Rohde. Figure (1) shows the difference between the equations for r_T given by the two sets of authors. It will be noted that at 0°C the corresponding salinity difference is approximately 0.0085 $^\circ/_{\circ\circ}$, a most significant error. Brown and Allentoft (1966) took data down to 0°C so that the least squares fit of their data cannot be reliably extrapolated below that value. Dauphinee and Klein continued their measurements of conductivity ratio down to at least -3°C, well into the supercooled region, and their readings should be reliable down to freezing point. Some knowledge of this anomaly has been obtained previously from Dauphinee's work at the National Research Council in Ottawa as reported in Perkin and Walker (1972), but the recent series of experiments show it to be larger than anticipated, nearly 0.02 $^\circ/_{\circ\circ}$ at freezing point. Another concern is in the recent measurements of the variability of conductivity at a fixed chlorinity between batches of Copenhagen water (Millero, Chetirkin and Culkin, [1977]). They measured conductivity normalized to the conductivity of batch "P64" and their results are shown in Figure (2) where the variation in conductivity has been converted to an equivalent salinity. Also shown on Figure (2) are the results of absolute conductivity taken by Poisson (1976), expressed as variations around the assumed zero of P64. Independent and unpublished work by Dauphinee at Ottawa and Ross at the Bedford Institute of Oceanography have both confirmed the results of Millero et al (1977) within ± 0.001 $^\circ/_{\circ\circ}$ (private communication, 1976). Thus even if the extraordinary values for batches P49, 50, & 51 are omitted variations of magnitude ∿ 0.003 $^\circ/_{\circ\circ}$ could occur due to differences in the batches of Copenhagen water used for calibration purposes. With modern thermostated bench salinometers it is possible to make conductivity measurements to a resolution of ± 0.001 $^\circ/_{\circ\circ}$ and accuracy of maybe 0.0023 $^\circ/_{\circ\circ}$ (Farland, 1975) making this variation in the standard important.

Figure (2) and Table 2 both illustrate the fact that a chlorinity titration is not really a suitable method for obtaining a conductivity standard. Even if Copenhagen water were such a standard its collection and processing are complex and the question arises "could not some artificial standard be promoted in its place?" Dauphinee and Klein (1977) made measurements on artificial seawater made up to a salinity of 35 $^\circ/_{\circ\circ}$ as indicated by conductivity ratio of unity with Copenhagen water at 15°C. The temperature coefficient of conductivity was measured for this water and compared with that of Copenhagen water when it was found that a variation in the temperature coefficient equivalent to an error of 0.005 $^\circ/_{\circ\circ}$ salinity at 0°C would result. Thus an artificial seawater standard could not be properly used at temperatures other than 15°C without introducing a systematic error unless sets of equations and built in circuitry were changed. In view of all the existing equipment depending upon Copenhagen water for its calibration, it would be unwise to make any changes at this time. Nevertheless, it is essential that the properties of Copenhagen water be more clearly defined before a definitive set of equations, based upon the use of this water as standard, be published. From Table 1 it will be seen that the only data base used to compute Δ_{15} suited for a Copenhagen water standard is that of Brown and Allentoft (1966), and though Δ_{15} is comparatively insensitive to errors in temperature determination, the possible errors in their data illustrated in Figure (1) for r_T suggest a repetition of their measurements on R_T. Poisson intends to make further measurements on R_T in the next year (private communication, 1976) and Dauphinee will measure the temperature coefficient of diluted Copenhagen water samples so as to determine the closure error in progressing round a rectangle on the salinity-temperature plane as shown in Figure (3) (private communication, 1976). To date, Millero and his colleagues have not published the data giving

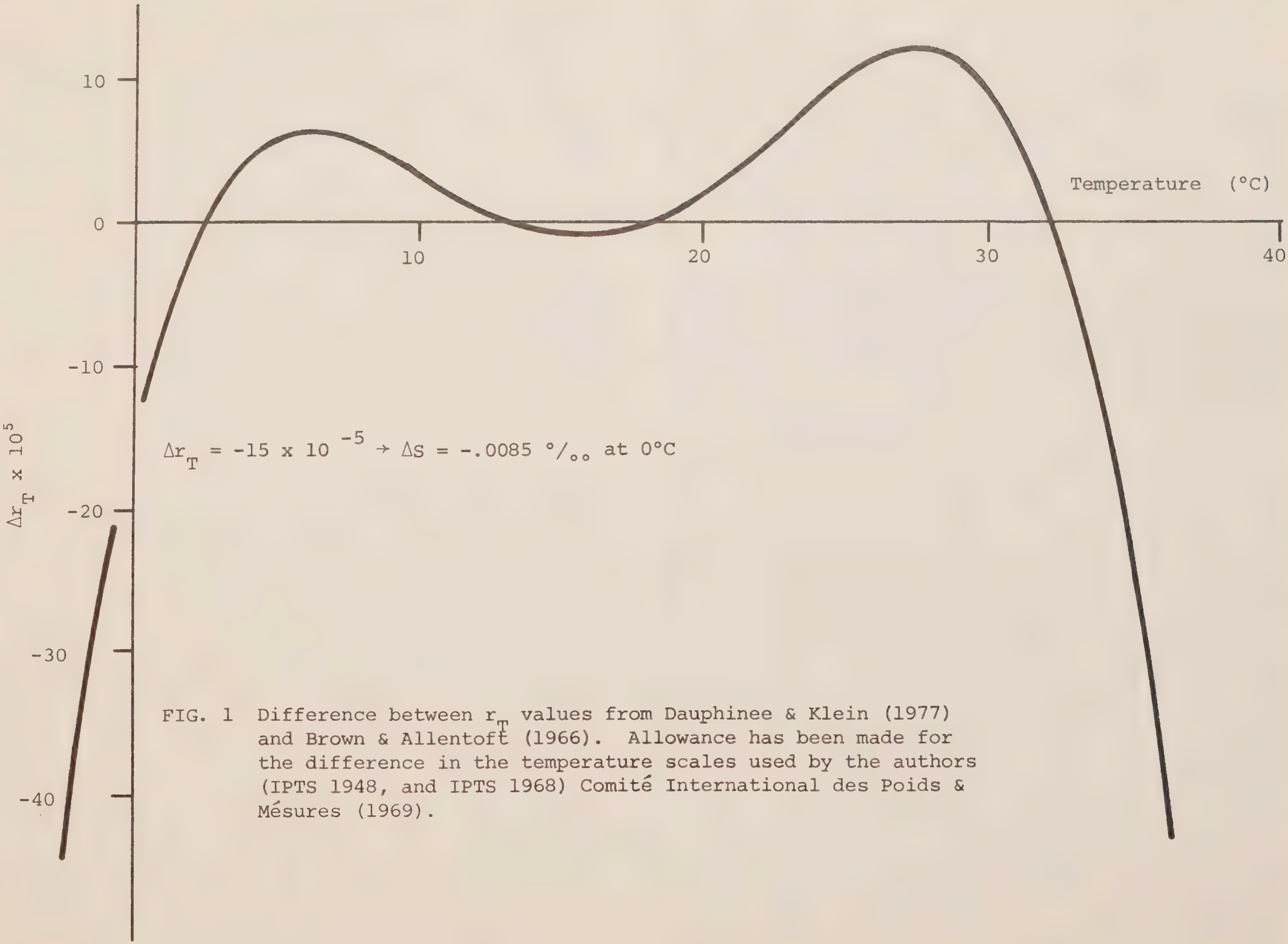

FIG. 1 Difference between r_T values from Dauphinee & Klein (1977) and Brown & Allentoft (1966). Allowance has been made for the difference in the temperature scales used by the authors (IPTS 1948, and IPTS 1968) Comité International des Poids & Mésures (1969).

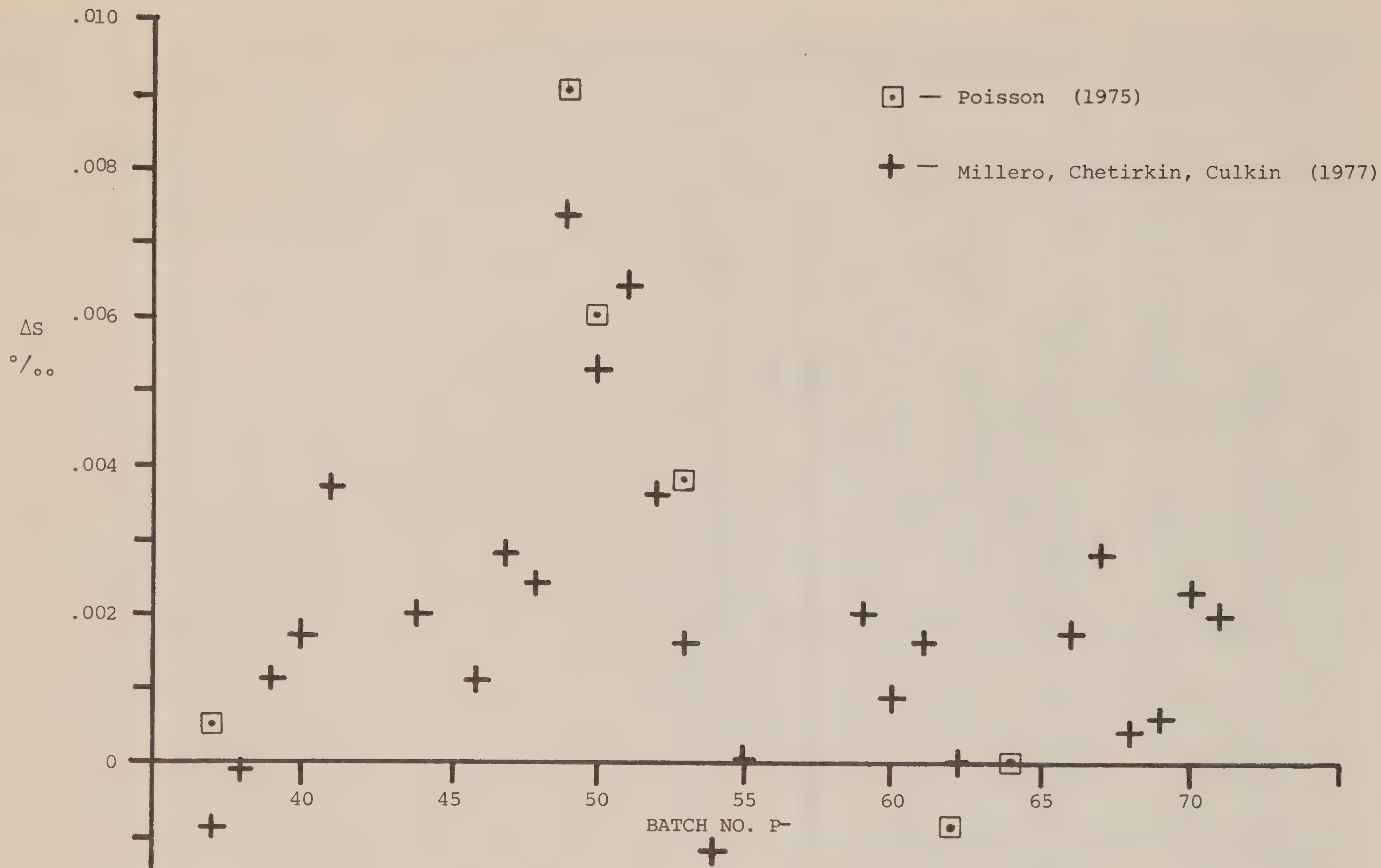

FIG. 2 Difference between conductivity salinity and chlorinity salinity for Copenhagen water as a function of batch number normalized to batch "P64". $\Delta S = S(\text{COND.}) - S(C\ell)$ ppm

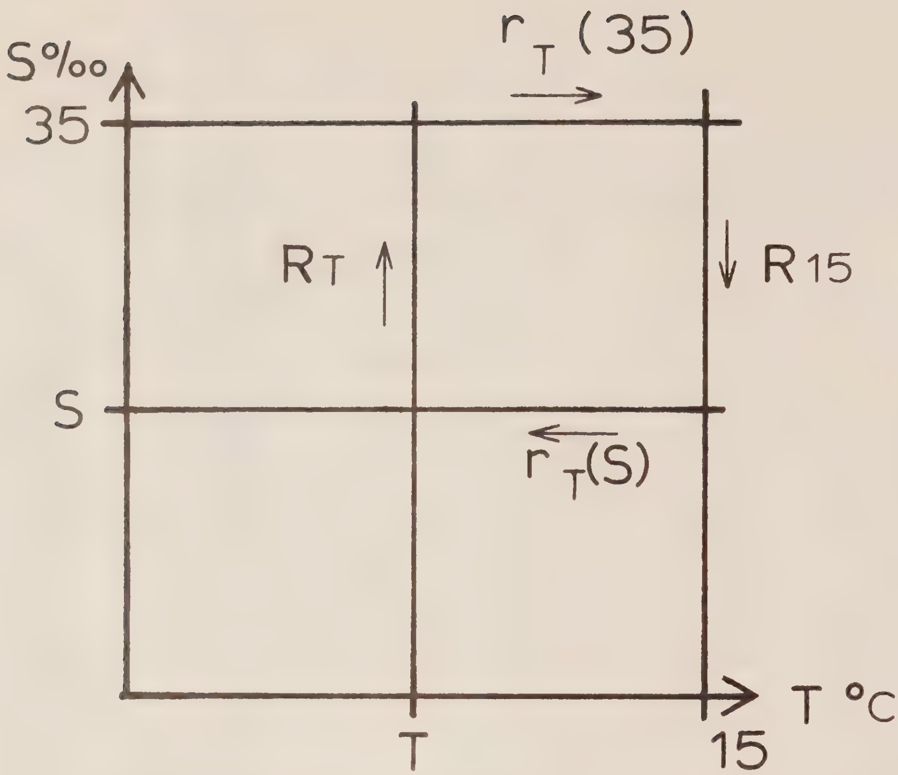

FIG. 3 Testing of "closure" in the ST plane by measurement of the parameters shown as suggested by Dauphinee.

rise to their form of $S = F(R_{15})$, our equation (13), and are presently repeating and extending their measurements to produce an improved version (private communication, 1976). There is a requirement to extend the data of Bradshaw and Schleicher (1965) on pressure coefficients to salinities below 31 $^{\circ}/_{\circ\circ}$, though it would not be necessary to do this at very high pressure as all the world's waters having salinities below that figure are probably in the top 300 meters. At the present time no new equations for CTD data reduction are recommended. New measurements allowing a definitive equation for standard seawater to be formulated should be available by the end of 1977.

Supposing that an adequate data base were available, what is the best method of using it? A new definition and computational procedure for salinity would be utilized by institutions and individuals with a wide range of sophistication in their appreciation and use of instruments. Data arising from proper use of instruments should be available to the world oceanographic community without annoying problems about corrections to be made for different water masses. There should be a standard salinity which should remain invariant under a compositional transformation. Defined by weight for standard seawater, it should be defined by the $S = F(R_{15})$ equation based on standard water for all other waters. It has already been indicated that densities computed from such a salinity may be corrected by an additive constant and the density differences rarely will require any correction whatsoever. The advent of good bench density measuring equipment, commercially available at a cost not exceeding that of a first-class bench salinometer, (Picker, Tremblay and Jolicoeur, 1974) should enable any institution to define its local water mass or that at the location of an experimental program in terms of a density correction to be applied to their CTD based calculation. It is most probable that unless their studies are global in scale or involve a few locations of particular difficulty that no corrections will be needed for the majority of computational purposes. Less sophisticated institutions need not bother about corrections at all but their data would be available on a common base for the use of those whose studies required them to go to that trouble. Coastal oceanographers operating near the delta of some very large rivers could have special problems over the continental shelf which which could be resolved either by the use of a densiometer or by chemical composition studies, depending on the main interest of the investigator. Often no correction would be necessary, for example, the value of dynamic height computations in such a region is questionable in terms of the accuracies we are now discussing. Certainly those operating near the mouth of an "average" major river could probably neglect the problem with impunity!

The question of the conservatism of salinities defined by weight dilution and labelled with a value of R_{15} is important. If one mixes two masses of diluted Copenhagen water of different salinity by definition the property is conservative. What happens if we mix say two masses of Pacific water with the same ionic ratios? This is equivalent to diluting one of those masses, the more concentrated, with distilled water as this too will preserve the particular ionic ratios. Some answer to the question may be found in the data of Brown and Allentoft (1966) who diluted seawater samples from many sources with distilled water and investigated in each case the change in R_{15} in relation to a weight defined salinity calculated from their dilution ratios. In no case upon dilution down to around 10 $^{\circ}/_{\circ\circ}$ salinity did the difference between a weight defined salinity and that calculated from their general $S = F(R_{15})$ equation exceed 0.003 $^{\circ}/_{\circ\circ}$ and was usually much less so that for all practical purposes S is conservative in water masses with the same constitutional composition. This deduction depends on the precision (not accuracy) of their measurements.

When water masses with different composition are mixed it is possible to estimate the degree of conservatism through noting that the same density implies the same S_A at a given temperature. Thus, at the same R_{15} value the density correction of 0.034 taken from Table 5 for Baltic waters can be interpreted as a difference in S_A of about 0.05 ‰ between those waters and the diluted Copenhagen water standard. Thus a mixture of Baltic water and Copenhagen water in equal proportion would only be conservative to within about 0.025 ‰. Such cases are extraordinary in nature except for small depth intervals near the surface where the rates of change of salinity with depth are usually so great that it would still be easy to use salinity as a tracer for water movement. The above argument depends upon the fact that S_A should be conservative. This in turn depends upon the absence of precipitation, change of constituents by biological activity, and chemical reaction as the water types mix.

As the majority of oceanographers use conductivity as a route to salinity and density, chlorinity should be relegated to a secondary role and the term Copenhagen water might be restricted to the present chlorinity standard. It is suggested that "Wormley water" should now make its appearance, defined as a conductivity standard by having a fixed conductivity ratio with a standard potassium chloride solution made by dissolving a given weight of potassium chloride in a given weight of water. Wormley water could still be used for chlorinity titrations, but its definition would reflect the fact that the anticipated accuracy for salinity determined by titration was less than might be expected from an electrical conductivity reading. Chlorinity would become a secondary standard with equation (10) applying to Wormley water only. Modern thermostated bench salinometers lend themselves easily to the type of operational procedure that will be required to standardize Wormley water against the "by weight" $KC\ell$ solution. The conductivity of potassium chloride is the standard used by physical chemists based on the results of Jones and Bradshaw (1933) who measured absolute conductivities. However it is most important to realize that the ratio reading proposed does not require any precise knowledge of the value of absolute conductivity, merely that the ratio be stable. It is desirable to use a dilution of a weighed amount of salt rather than refer to normality as the latter involves knowledge of atomic weights which conceivably might be altered by future investigators. Another contender for the standardization procedure is a sodium chloride solution. Until recently this salt could not be obtained at a level of purity equivalent to that of $KC\ell$ and it is potentially deliquescent but has the advantage that its temperature coefficient of conductivity in solution is nearly the same as that of seawater. This means that the temperature control of the bath required to make the conductivity comparison may be less rigorous. A potassium chloride standard would require thermostatic control to ± .01°C to achieve comparison equivalent to about 0.0004 ‰, an acceptable error, and as ±.01°C control is not too difficult to achieve and would be required only at the standardization centre it would seem preferable to use $KC\ell$ because of the very detailed knowledge of this electrolyte available.

It has been suggested that a temperature other than 15°C should be used for standardization as it is much easier to heat a bath up from room temperature of 20°C, than cool it. A major objection is the formation of bubbles in the solutions as they are heated above room temperature. The seriousness of this objection varies with salinometer type.

Summary and Conclusions

The major problem with the present definition of salinity as recommended by Wooster, Lee and Dietrich (1969) and the International Tables (UNESCO 1966a) which are based upon these definitions are

1) That salinity is in fact defined in terms of chlorinity, an ion specific measurement, making salinity so defined insensitive to changes in the ionic ratios of seawater from one location to another.

2) The mixtures of seawaters used to obtain an "average seawater" in the relation between chlorinity and R_{15} is essentially non-reproducible and does not allow simple expression of density or R_{15} corrections for any given water mass in terms of the standard.

3) The International Tables do not go below 10°C which makes them unsuited to apply to the majority of in situ CTD readings. Present formulations have therefore been forced to be based upon the work of Brown and Allentoft (1966) or on a marriage of this data with the International Tables. The two sets of data are not based upon experiments with seawater having the same ionic ratios and, as has already been noted, ionic ratios in the Tables vary as a function of salinity.

There is now ample experimental data to support the statement in that density may be predicted from conductivity with nearly an order of magnitude better precision than is possible from a chlorinity titration (UNESCO 1963) and it is this circumstance that has made currently used definitions and data reduction procedures inadequate. A useful definition of salinity should be made in terms of a water mass of constant ionic composition and provide a reference standard for conductivity rather than chlorinity whilst as far as possible being compatable with the existing definitions and procedures.

It is suggested that Wormley water be promoted as a conductivity standard corresponding to and having the same ionic content as Copenhagen water, the chlorinity standard. The equation

$$C\ell = S/1.80655 \qquad (10)$$

will apply to Wormley water only, as it is dependent on the ionic content and chlorinity will be the derived parameter. The salinity with which to enter the equation should be defined in terms of dilution/concentrations by weight of Wormley water which has a conductivity ratio of unity with a solution of potassium chloride of known purity made up to a fixed concentration by weight. The value will be adjusted in order to provide continuity so that the salinity of standard Wormley water will equal 35 ‰ and correspond to Copenhagen water. The salinity of all waters other than Wormley water will be defined from their R_{15} value by an equation of the form, $S = F(R_{15})$ derived from a study of Wormley water and its dilutions. The salinity so defined should be termed a practical salinity as distinct from an absolute salinity S_A defined as the mass of salts per kilogram of solution. S is related to S_A by the equation $S_A = \mu + \varepsilon S$; for Wormley water and its dilutions $\mu = 0$ and ε has a value of 1.00488 approximately. Should further measurements alter this figure no changes in the definition of salinity will be necessary. It is very probable that μ may be put equal to zero for almost all water masses, as the result of the ability of conductivity measurements to respond to a concentration of any ion. In the case of unionized compounds such as $Si(OH)_4$ it is still very probable that ε only need be used within practical limits of accuracy. Generally there is no need to know the value for S_A for physical oceanographic purposes, but if in some

manner it is known, a most unusual circumstance, it is nearly always possible to derive a salinity suitable for density calculations in the new equation of state by dividing it by 1.00488. This is the result of the experimental observation that waters with the same S_A have the same density, which does not imply that waters with the same S_A have the same R_{15}. To proceed in that direction it would be necessary to ascribe a value for ε for that particular water mass to obtain S and hence R_{15} from definition. The tables and calculations have demonstrated that densities calculated from these salinities are accurate for most oceanic waters within ± 10 ppm and that an additional correction can be made for regional or depth dependent anomalies if required. For most purposes densities are of less importance than density differences between oceanographic stations and these should not require any correction in oceanic waters.

Most estuaries have large density gradients associated with low salinity water so that an accuracy of ± 50 ppm determined from the density - salinity equation is often adequate. Silt and organic material which cannot be properly measured by a CTD system constitute a random variable in the water density of estuaries. Chemical precipitation, dissolved gasses, and diurnal variations in nutrients and changes in isotopic ratios are not sufficiently important to need a correction term in the density equation for almost all water masses.

The salinity of oceanic waters will be conservative if the ionic ratios are not a function of the depths between which mixing takes place. If such changes do occur an estimate of the bounds of conservatism may be made in terms of the absolute salinity and is most unlikely to be significant in terms of the probable density gradients giving rise to such a situation.

It is clear that one system of salinity definition and computation should be made available as soon as possible and all results from all laboratories quoted in terms of this practical salinity. Unfortunately existing data is not adequate for the purpose of producing a salinity value from conductivity that may with confidence be put into the new equation of state. New data relating to this conversion is currently being obtained by a number of investigators - the only gap being values for the pressure dependence of conductivity ratio below 31 °/₀₀ at depths down to 300 meters. It is anticipated that a new set of equations should be available during 1978 and that these should then constitute a secondary definition of practical salinity. Such equations would not require varying if later work on the chemical composition of seawater should alter accepted values for ionic ratios as this could be taken up in ε or changes in the 1.00488 constant for the case of Wormley water. Changes in the International Practical Temperature Scale (Comité International des Poids et Mésures, 1969) might require an additional equation converting the temperature of the new scale to IPTS (1968) if the change proved to be significant. While studies of the chemistry of seawater continued, the practical salinity scale could remain unchanged as would calculation of density to known levels of accuracy while institutions requiring superior levels of accuracy should be able to refer to an atlas of density corrections, largely a result of their own measurements on samples from their area of interest.

The present accuracy attainable with a carefully calibrated in situ CTD is considered to be ± 0.01 °/₀₀ ± 0.003°C and ± 1 db. If as a result of these recommendations or others similar these levels of accuracy are exceeded an updating of the density correction atlasses should be sufficient to cope

with the new situation and still, for most purposes where density differences are of importance rather than densities, no correction would be needed. It is most important that accepted new definitions and computational procedures for practical salinity should not require revision at a later date as a result of measurements. It will also be necessary to produce conversion formulae allowing investigators to convert existing salinity values into the new system.

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ABSTRACT

A method is described for deducing some fundamental information on the vertical gradients of oceanic temperature and salinity from horizontal measurements. This information is necessary for the proper understanding of accompanying measurements of high frequency temperature and velocity.

1. INTRODUCTION

It is by now established that within the main pycnocline of the ocean, microstructure of such properties as temperature, salinity and velocity occurs in isolated patches embedded within larger scale structures. Since one of the major objectives in studying microstructure (scales smaller than about .5 m) is to investigate the causal relationships among various scales of structure in the ocean, it is obviously desirable to know the "background" of microstructure measurements. Knowledge of the local vertical structure surrounding a patch of microstructure is particularly essential since evidence points to vertical property gradients being about 10 times horizontal. Moreover, the signs of the vertical gradients of temperature and salinity govern possible mechanisms for microstructure generation.

Most microstructure measurements are presently made from vertically dropping free-fall instrument packages which produce information on all vertical scales, but offer no information about horizontal extent. Information about horizontal scales must come either from large numbers of free-fall instruments, or from horizontal tows of a single instrument, the technique which will be discussed here. To make uncontaminated measurements of microstructure from an instrument package towed behind a surface ship, it is necessary to isolate the package in some way from the heaving of the ship; however, in achieving a constant depth tow and relatively clean microstructure measurements, one loses, at first sight, the vital information of the vertical structure through which the tow is taking place. For example, the towed system used to obtain the measurements discussed in this paper (a system originally designed and built by the Defence Research Establishment, Pacific, but used since 1972 by the Ocean Mixing Group of Environment Canada) was designed to permit measurements of microscale fluctuations of temperature and velocity with platinum film sensors, and to supply some background information such as mean temperature, T and salinity, S along the tow. The towing winch was servo-controlled and, towing with the local swell, could keep the body within ±1 m of a pre-set towing depth. This meant that no "vertical" information could be obtained due to the body being moved up and down through the water column.

A constant depth tow also produces difficulty in trying to estimate true horizontal extent of microstructure patches. Available evidence shows, perhaps not surprisingly, that such patches tend to occur along isopycnal surfaces, and since isopycnals are almost always deformed by internal wave motions, a constant depth tow may pass repeatedly in and out of the same patch. Figure 1 illustrates this problem, using data from a cycling mode of operation in which the towed body followed a sawtooth pattern through the water. One may plot T, S, and σ_t from successive up and down cycles as quasi-vertical profiles, and Figure 1 shows several such T profiles, with occurrences of temperature microstructure measured by the platinum film plotted alongside (+, x, • in order of increasing strength). The shaded region marks the envelope (±1 m) of a hypothetical tow. Taking the region of T microstructure activity which is apparent between the σ_t-surfaces of 26.38 and 26.40, we see that a horizontal tow would record 3 patches of T microstructure of varying length (marked roughly a-b, c-d, e-f on Figure 1), but that these would in fact all be part of one patch with a horizontal scale larger than the piece of record shown in Figure 1.

This note will describe a method of using a limited number of sensors on a constant depth vehicle to determine the vertical structure through which the sensors are towed, and to produce more reliable information on horizontal patch size.

2. ANALYSIS METHOD

One approach to obtaining vertical information from horizontal tows would be to mount a minimum of two conductivity-temperature (C-T) sensors spaced vertically on the towed body. Unfortunately, this straight forward method has a number of drawbacks:

1) A larger number of sensors have to work.

2) It is difficult to choose the fixed vertical spacing of two sensors to give representative local vertical gradients. Because finestructure of properties occurs on a wide range of scales (down to $\sim$ .5 m), too widely spaced point sensors may not define the local (finestructure) gradient in which the microstructure occurs, while too closely spaced sensors will start to be seriously affected by microscale variations. Variation in effective vertical separation, caused by pitching motions of the towed body, might also become a significant source of error for closely spaced sensors.

3) Whatever vertical spacing is chosen, the difference measurement between two point sensors will become very "noisy" whenever either or both sensors pass through regions containing temperature or salinity microstructure.

4) Finally, and most serious, is the fact that small calibration errors can produce substantial uncertainties in the (usually small) difference between two point sensors. This difficulty will be evident in the difference temperature measurement used in this paper, and can only be worse for differences between derived quantities, like salinity (S) and density (ρ or σ_t) which will involve calibration errors in both C and T.

The method described below produces high quality information from a bare minimum of sensors, those shown mounted on the towed body in Figure 2. A single through-flow conductivity and temperature sensor (C-T_B) is located at the same level as the platinum film velocity and temperature sensors (V and T), while one additional thermistor (T_A) senses temperature at a point 1 m higher. Depth is sensed by a pressure gauge (Z) within the body housing.

The analysis technique arises from the realization that the ocean sees nothing sacred about a constant depth surface. In recent years, it has become accepted that the interior of the ocean supports a quasi-steady climate of internal wave motions, motions which continuously distort isopycnal surfaces. Thus, isopycnal surfaces are constantly moving up and down past any fixed depth, causing the temperature and salinity measured at that fixed depth to move up and down along the local T/S curve. If one measures the sign of the vertical gradient of just one property (T is obviously easiest), one has the basic information on vertical gradients: the signs of the local vertical gradients of T and S, and (from the slope of the T/S curve) some estimate of

the magnitude of the local vertical density gradient.

Figure 3 is a schematic of the process used to determine the signs of the local T and S gradients. The values of T and S along the tow path, plotted in the T/S plane, allow the basic differentiation between cases where T_Z and S_Z are of opposite signs (Case 1, negative slope in the T/S plane) or the same sign (Case 2, positive slope in the T/S plane). The addition of the sign of the temperature difference (T_A-T_B) between the upper and lower thermistors supplies the final information necessary to differentiate among the four basic states described at the right.

Some advantages of this method of analysis are:

1) Use of a minimal number of sensors.

2) Use of only one measurement involving the difference between two sensors, and then only the sign of the difference.

3) A resultant sensitivity to small changes in density which far exceeds that which could be hoped for by differencing densities measured with two instruments (see discussion of Example 3 below).

The principal advantage remains that, in place of time traces of temperature and salinity, filled with structure at all scales from the centimeter resolution of the platinum probes to the 3-4 kilometer scale of measurements at a constant towing depth, it is often possible to produce a relatively comprehensive picture of the local vertical structure through which the tow has passed, the changes of this structure with horizontal distance, and the relation of the structure to the patches of microstructure encountered within it. These claims will be substantiated by discussing a few examples in detail.

3. EXAMPLES

Each of the following examples contains two sets of graphs. The first set shows the time series of T, S and T_A-T_B along a constant-depth (generally ±1 m) tow path: each point is an average over 2 seconds. At towing speeds of 1.0-1.5 m/s, this is an interval short enough to reveal the significant finestructure features along the path, but long enough to produce a reasonable number of points from raw data sampled at 500 hz (C and T_B) and 250 hz (T_A). Also plotted is a rough indication of the relative strengths of the differentiated platinum velocity ($\dot{V}$) and temperature ($\dot{T}$) signals, intended only as a qualitative aid to locating microstructure activity relative to the larger scale structure. The levels of differentiated signal corresponding to the classification of "strong", "medium", "weak", and "noise" are shown in Figure 4.

The second set of graphs consists of two T/S plots. The left-hand plot uses the basic 2-second averages of T and S along the tow path, while the right-hand one shows 20-second averages in an attempt to provide a simplified impression of the direction of movement in the T/S plane during the tow. These 20-second averages have been numbered and used as a tow index (TI)

for referring to position along the tow (note the upper labelling of the horizontal time axis in Figure 5(a)). Lines of constant σ_t are also computed and shown in this second plot for the section of the T/S plane involved.

Example 1

Figure 5 is a tow in which patches of T microstructure at different points along the path are found to occur over a small σ_t range, suggesting the type of feature shown in Figure 1, a microstructure layer of fairly large horizontal extent, distorted in space and time by internal wave motions.

From the beginning of this tow until around TI 25, the approximate straight line character of the T/S plot suggests a medium with monotonic, although not necessarily smooth, gradients of all properties; since the T/S plot has negative slope, and $T_A-T_B>0$, we know that $T_Z<0$ and $S_Z>0$. All of the T and S finestructure in this part of the horizontal tow is produced simply by advection of vertical gradients past the tow depth. For example, the sharp drop in T and rise in S at TI=2.5 is produced by the rise of a sharp step-like structure in T, S, and ρ. This feature is somewhat weakened by averaging over 20 second intervals and hence is most evident in the first T/S plot; at the beginning of the record the T/S points cluster around $T=8.25^{o}C$ and $S=32.69^{o}/oo$, then move very abruptly to a substantially higher density, characterized by higher salinity and lower temperature.

Because of the water movement, the first strong patch of T microstructure (TI=21) can be unequivocally identified as the beginning of this patch in the horizontal, since the T/S trace previously crossed this isopycnal range (TI=19-20) without measurable T microstructure. During this patch, there is active T microstructure over a σ_t range of $\sim$26.530 to 25.545, while the (T,S) point moves to lower temperature and salinity along the surface σ_t=25.545. The other two large patches of T microstructure in the towing record occur as the T/S curve passes through this same σ_t level (TI=46-47, TI=56-58), indicating a preferred density location for the process which is producing the T microstructure. Given the slope of the T/S curve, this process must be some sort of shear instability, possibly associated with the frontal character of the changes in T and S along isopycnals, at TI=29-31. It should be noted that this "layer" of T microstructure appears to be intermittent, as the tow occasionally passes through the σ_t=25.545 surface without measuring T microstructure above noise.

Example 2

The second example, shown in Figure 6(a) and (b), is a region in which the slope of the local T/S relation varies in a fairly complex manner. Some of the changes are certainly due to motion of isopycnal surfaces past the tow depth: for example, the general movement to lower σ_t values between TI=1 and 33, followed by a descent to higher densities once again by the end of the record. This gentle isopycnal motion will advect any embedded vertical finestructure past the sensors. Thus, the cusp of the T/S curve between TI 15 and 22 may be due to uni-directional passage through a finestructure minimum in both T and S. However, it is clear that in this sample, at least

some of the variation of the T/S curve, and hence some of the apparent horizontal structure in the tow record, must be attributed to true horizontal variation of mean properties. As an example, take the abrupt change in slope of the T/S curve at TI 33. From TI 25 to 33, the T/S curve has negative slope, indicating opposing gradients of T and S: since $T_A - T_B > 0$, we have the usual stratification for the eastern North Pacific region in which this tow was taken, salinity increasing and temperature decreasing with increasing depth (case 1.1 in Fig. 3). At TI 33, the slope of the T/S curve changes abruptly (although maintaining the same sign), so that when the $\sigma_t = 26.875$ surface again rises past the sensor, it is marked by a measurably different T and S, the change having occurred within the approximately 200 m of tow between TI 30 and 37.

Most of the temperature microstructure in this sample is associated with those parts of the T/S curve which are approximately parallel to isopycnal surfaces. Accepting the continual motion of isopycnal surfaces across the tow depth, these are regions where both T and S decrease with increasing depth (case 2.2 in Fig. 3, since T/S slope is positive and $T_A - T_B > 0$ generally), while the density is locally constant over some unknown vertical extent. This deduced structure suggests regions of small-scale salinity inversions, such as those previously observed in some cycling data. Figure 7 shows a few cycles of such a region, from data taken off the coast of Washington in 1972. Note both the association of high values of differentiated temperature (normalized in this figure by the local half-meter mean temperature gradient) with the regions below a local vertical salinity maximum, and the tendency for the density to be almost constant through these regions.

The only velocity above noise appears to be associated with the edges of these regions of temperature activity. It should be remarked that the platinum velocity probe senses only axial velocity fluctuations. Thus, in the straight tow mode, it would sense only approximately horizontal fluctuations and would be insensitive to quasi-vertical velocities associated with salt-fingers, if such indeed are acting to produce the temperature microstructure in these regions of negative temperature and salinity gradients. The lack of velocity structure within these regions might then be taken as evidence supporting the salt-fingering hypothesis.

Example 3

The final example illustrates the sensitivity of the technique to small changes in density, as well as the difficulty of using difference measurements, such as $T_A - T_B$ in conditions of low vertical gradients. This example also shows how an apparently complex record of temperature and salinity structure may (occasionally) be interpreted in a very simple manner.

As seen in Fig. 8(a), the temperature and salinity generally fluctuate in phase along this tow, indicating that the local vertical gradients of T and S have the same signs. Unfortunately, the temperature difference record does not determine the sign of the gradients in this case. The zero (Z) for $T_A - T_B$ has been re-marked to the right of the trace in Figure 8(a) in a position determined by another tow from the same station (hence the same thermistor calibrations). Throughout this latter tow, the T/S plot was

parallel to the S-axis: hence the constant level of T_A-T_B through this isothermal region has been taken as the zero level. With this correction, the temperature difference record in the present example shows only a random scatter about the zero gradient level. The temperature microstructure seems to occur almost at random relative to the larger scale temperature and salinity features, and it would be difficult to determine anything beyond the undoubted existence of both scales without the addition of the T/S diagram. Figure 8(b) shows that, with this addition, the local vertical structure appears quite simply as two isopycnal layers, each stratified in T and S. All the larger scale structure is produced as the position of the interface between these two layers varies relative to the towing depth. For the part of the record marked 1, the body is towing mostly in the upper layer (with the exception marked by a small 2); it then descends into the higher density layer, 2, presumably because this layer is rising slowly, and remains there for the rest of the tow.

Although the slope of the T/S plot indicates that the T and S gradients must be of the same sign, the temperature difference T_A-T_B is too small in this area to determine the sign conclusively in either layer, and it becomes necessary to use other evidence. The first such evidence comes from the region marked A in Fig. 8(a), where the body passes down through layer 1 and into layer 2 (since for stability, the higher density layer 2 must lie below layer 1). Since the low temperature end of layer 1 is immediately above the transition to layer 2, T_Z and S_Z are necessarily negative in layer 1. All the temperature microstructure is associated with the lower temperatures, hence the bottom of layer 1. The second clue is that both transitions from layer 1 to layer 2 involve a very abrupt increase in both temperature and salinity (and associated step increase in density) to a region characterized by the highest temperatures and salinities observed in layer 2, and an absence of T microstructure. If this is thus taken as the part of layer 2 closest to the interface between the two layers, T_Z and S_Z are necessarily negative in layer 2 also. The composite picture becomes that of two constant density layers with T_Z and $S_Z<0$, separated by a step-like change in density caused by sharp increases in T and S, and having active T microstructure only at the bottom of each layer. This situation is very similar to that illustrated in the first profile of Figure 7, at about 280 m.

In any attempt to understand ocean structures and the relationships among various scales of variance, this derived model consisting of two constant density layers is much more useful than the original tow records.

FIGURES

Figure 1 Quasi-vertical temperature profiles obtained from consecutive cycles of a sawtooth towing pattern. The temperature scale refers to the first cycle only, and must be shifted to the right by one scale division (.2°C) for each successive cycle. A measure of T microstructure (T variance measured by a platinum film thermometer, normalized by the local half metre T gradient), is superimposed (+, x, · in order of increasing strength). T microstructure is seen to occur roughly along isopycnal surfaces. The straight shaded line represents the depth range (±1 m) of a hypothetical tow through the area.

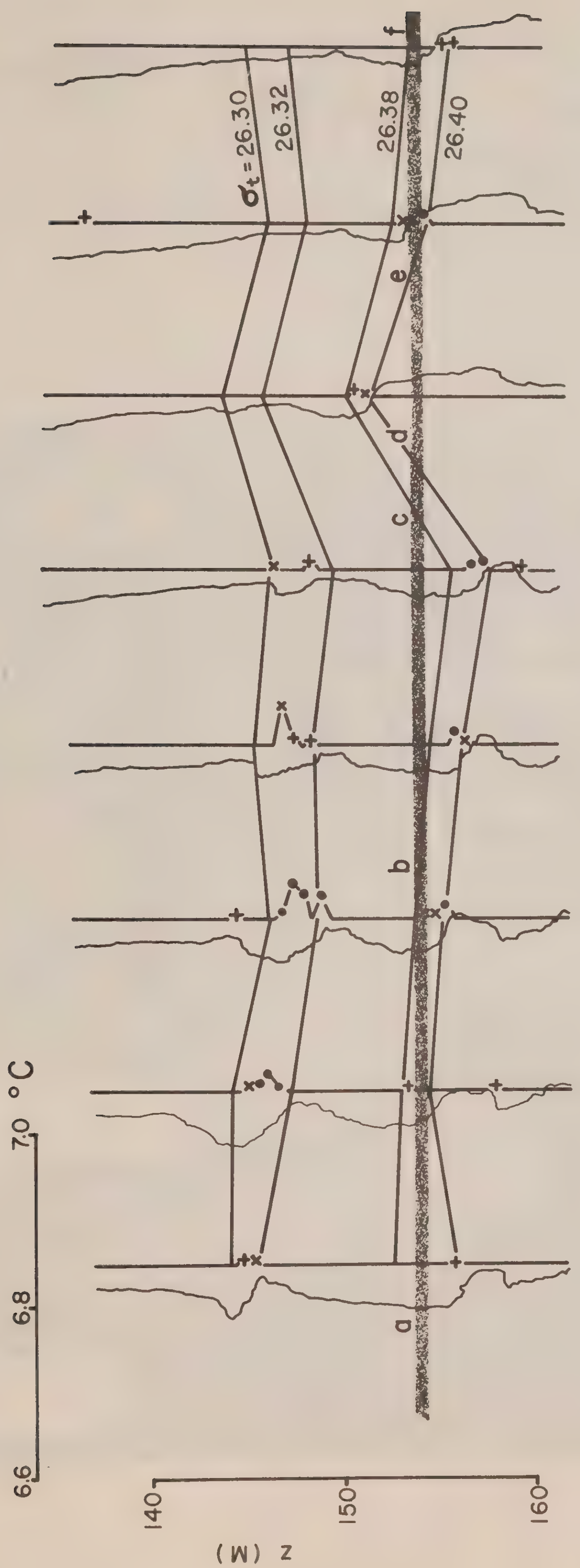

$\sigma_t = 26.30$
26.32
26.38
26.40
a
b
c
d
e
f
6.6
6.8
7.0 °C
140
150
160
z (M)

Figure 2 Sensor configuration on towed body:

T_A - thermistor
C-T_B - conductivity-temperature sensor
V - hot-film platinum velocity sensor
T - cold-film platinum temperature sensor
Z - depth gauge
Vertical separation between T_A and T_B is 1 metre.

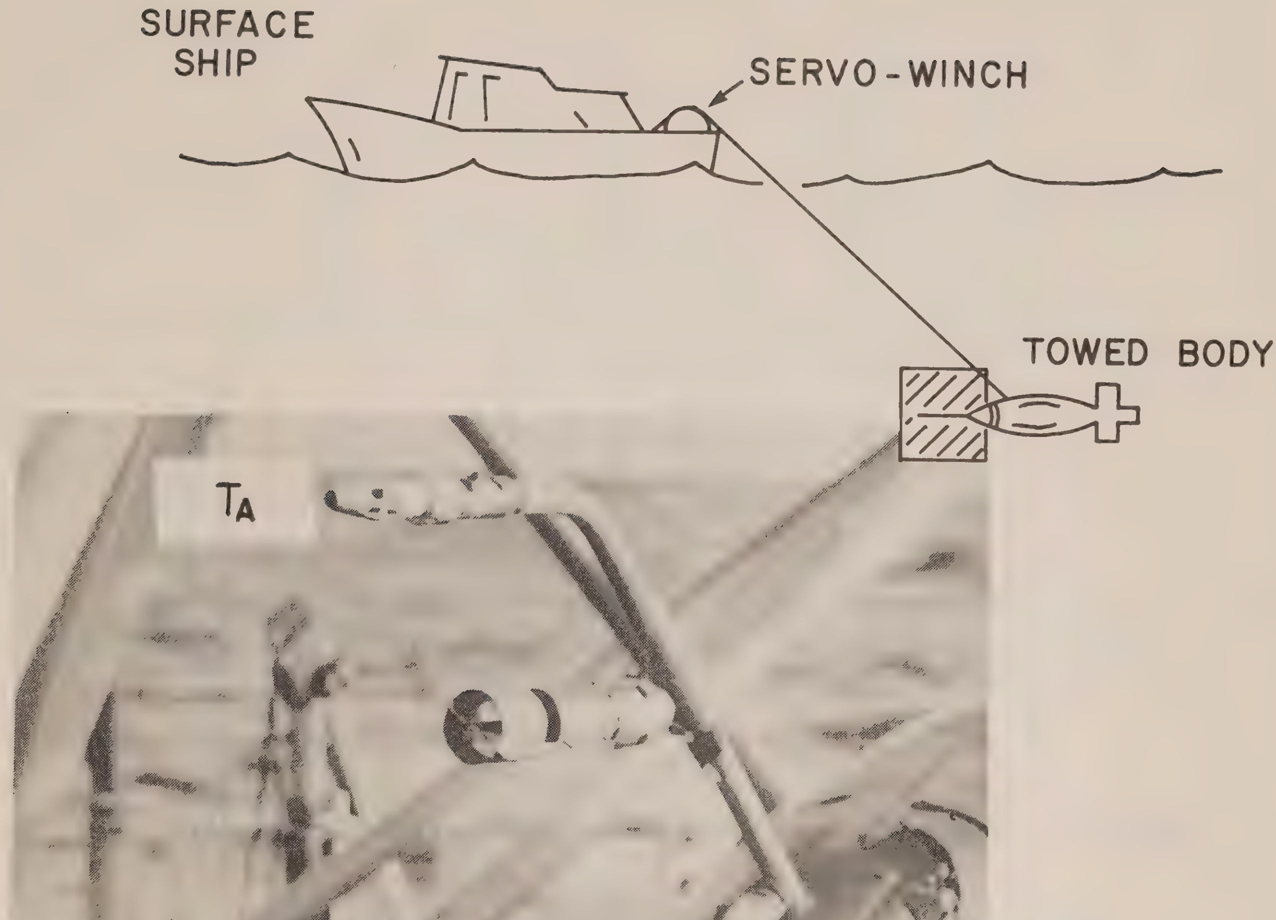

SURFACE SHIP
SERVO-WINCH
TOWED BODY
T_A
Z
C - T_B
V, T

Figure 3 Outline of analysis scheme: see text for explanation.

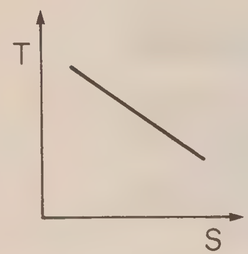
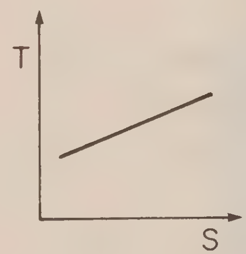
INFORMATION: SLOPE OF T/S CURVE	SIGN $(T_A - T_B)$: (z positive down) +	−	
1. 	1. $T_z < 0$, $S_z > 0$		only shear instability possible
		2. $T_z > 0$, $S_z < 0$	gravitationally unstable
2. 	1. $T_z < 0$, $S_z < 0$		salt-fingering possible
		2. $T_z > 0$, $S_z > 0$	double-diffusive layering possible

Figure 4 Examples of signal strengths for the qualitative measure of temperature and velocity microstructure. Platinum film temperature (T) and velocity (V) are differentiated with analog filters: the pass band of 20-50 hz was chosen to include the peaks of the variance spectra for typical towing speeds of 1.0-1.5 ms^{-1}, while rejecting vibration frequencies (less than $\sim$18 hz).

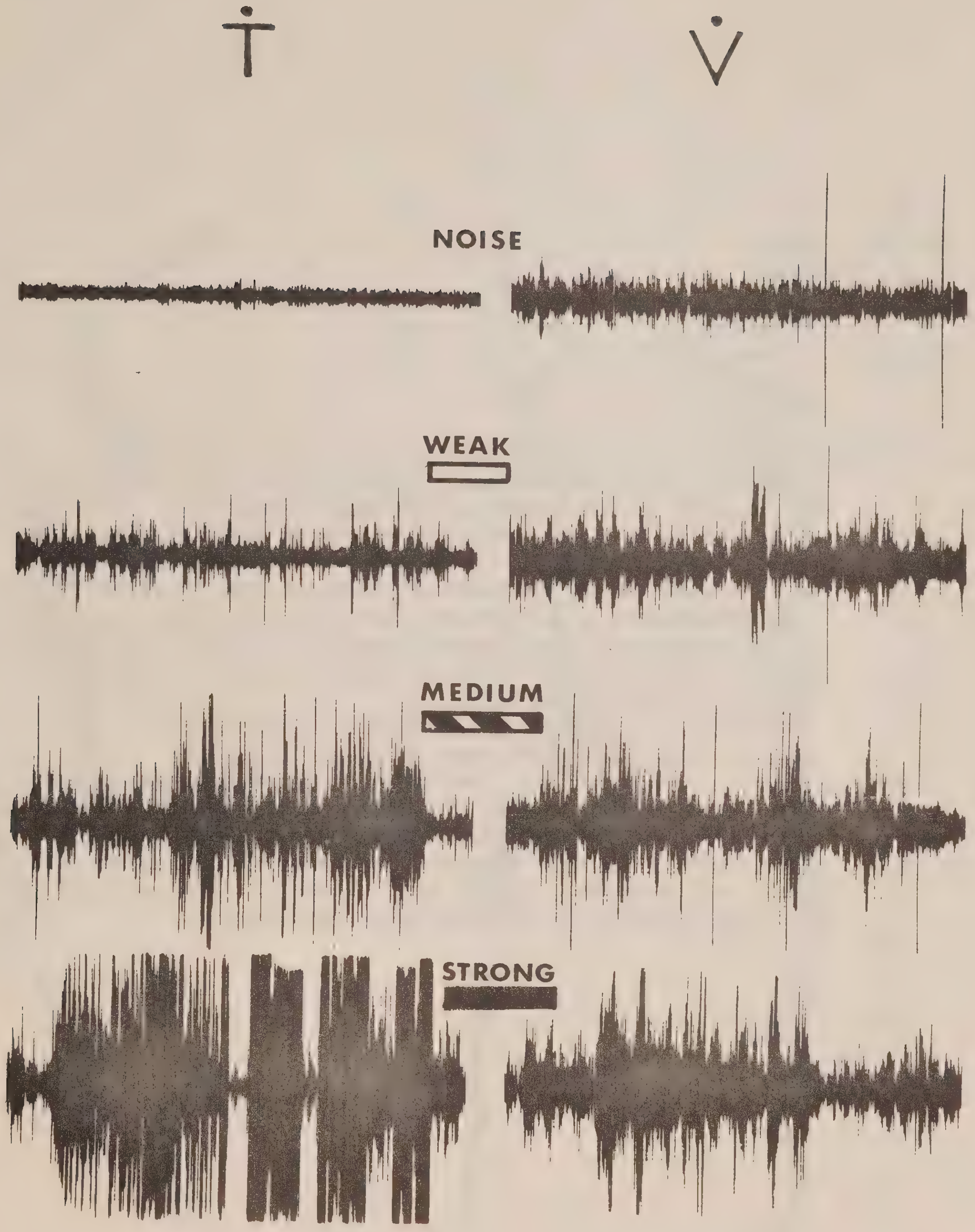

NOISE
WEAK
MEDIUM
STRONG

Figure 5 (a) Two-second averages of T_B, S, T_A-T_B along the tow path. The time axis is marked below in seconds, and above as an index (TI) which is the number of 20-second intervals: this tow index TI is used to reference points in the T/S plane (see (b)).

A qualitative estimate of the strength of velocity ($\dot{V}$) and temperature ($\dot{T}$) microstructure is also shown (see Figure 4): portions of the $\dot{V}$ record marked by a bar indicate regions where there is no velocity information, due to excessive motion of the probe mount.

Units for T = TEMP B are degrees Centigrade
S = SALINITY are parts per thousand
T_A-T_B are degrees Centigrade per metre

The zero for the temperature difference measurement T_A-T_B has been re-marked on the right of the trace at a level determined by samples with zero temperature gradient (T/S curve parallel to S axis over most of the tow): this is necessary due to limited accuracy of thermistor calibrations.

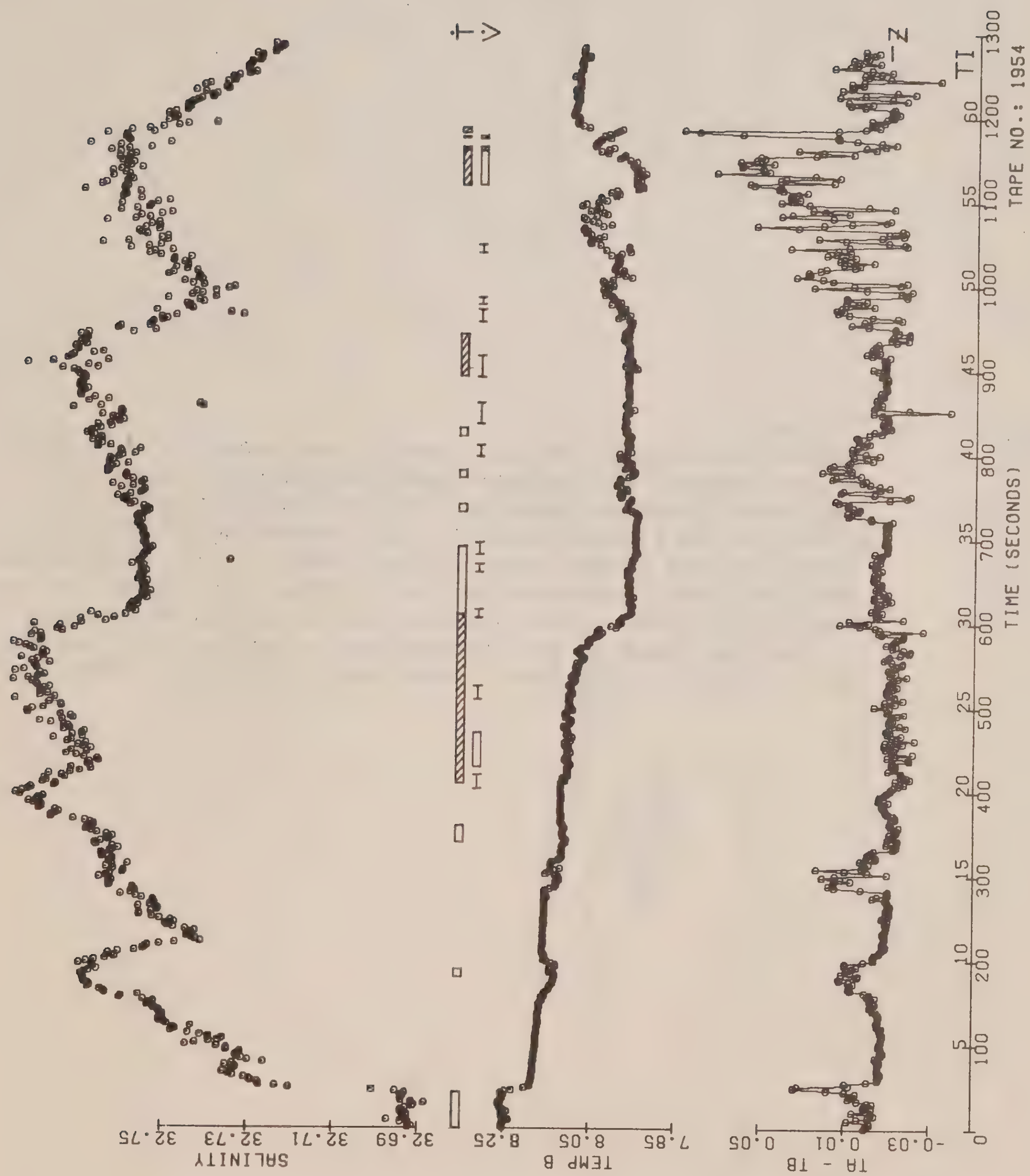
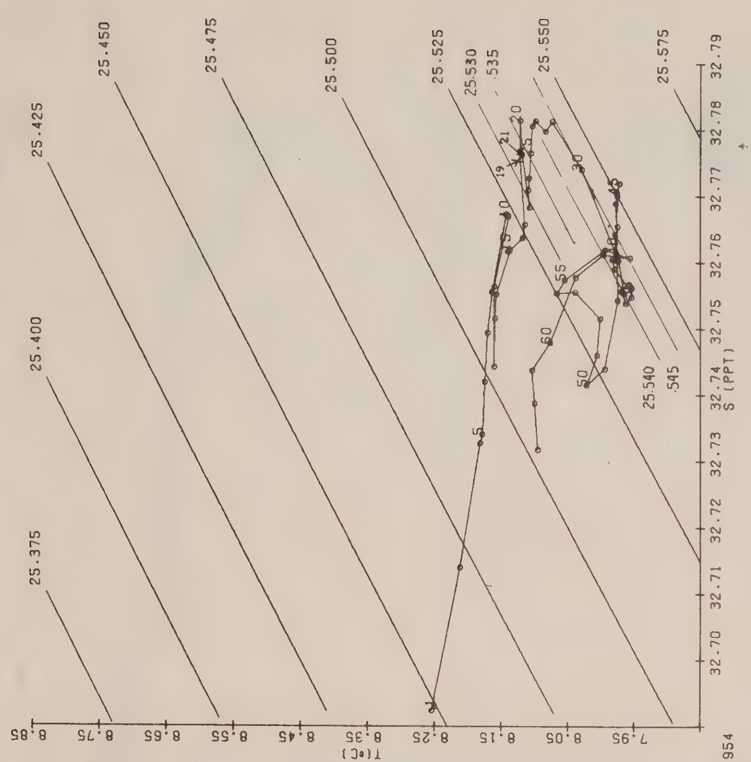

SALINITY
32.69
32.71
32.73
32.75
TEMP B
7.85
8.05
8.25
TA - TB
-0.03
0.01
0.05
TIME (SECONDS)
TAPE NO.: 1954
TI
Z
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
5
10
15
20
25
30
35
40
45
50
55
60

Figure 5 (b) T/S plots.

The left-hand plot uses the T and S data shown in (a), that is, each point is a 2-second average, while the right-hand plot uses 20-second averages. Decreasing the number of points in the right-hand plot allows numbering of points (corresponding to the index TI described in (a)), which shows the direction of movement in the T/S plane throughout the tow. Lines of constant σ_t are also plotted as an aid to analysis.

The tow shown in this figure took place just off the west coast of Vancouver Island, approximately 48°30'N, 128°W.


25.375
25.400
25.425
25.450
25.475
25.500
25.525
25.530
.535
25.540
.545
25.550
25.575
T(°C)
8.85
8.75
8.65
8.55
8.45
8.35
8.25
8.15
8.05
7.95
S (PPT)
32.70
32.71
32.72
32.73
32.74
32.75
32.76
32.77
32.78
32.79

TAPE NO.: 1954

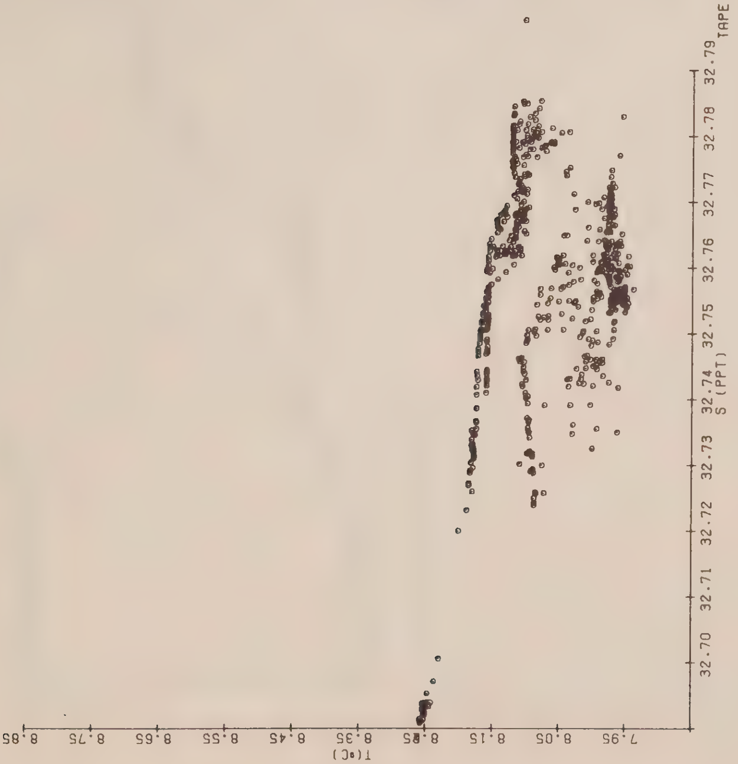

T(°C)
8.85
8.75
8.65
8.55
8.45
8.35
8.25
8.15
8.05
7.95
S (PPT)
32.70
32.71
32.72
32.73
32.74
32.75
32.76
32.77
32.78
32.79

Figure 6(a) The tow shown in this figure took place in the same area as that in Figure 5. For further details, see caption to Figure 5(a).

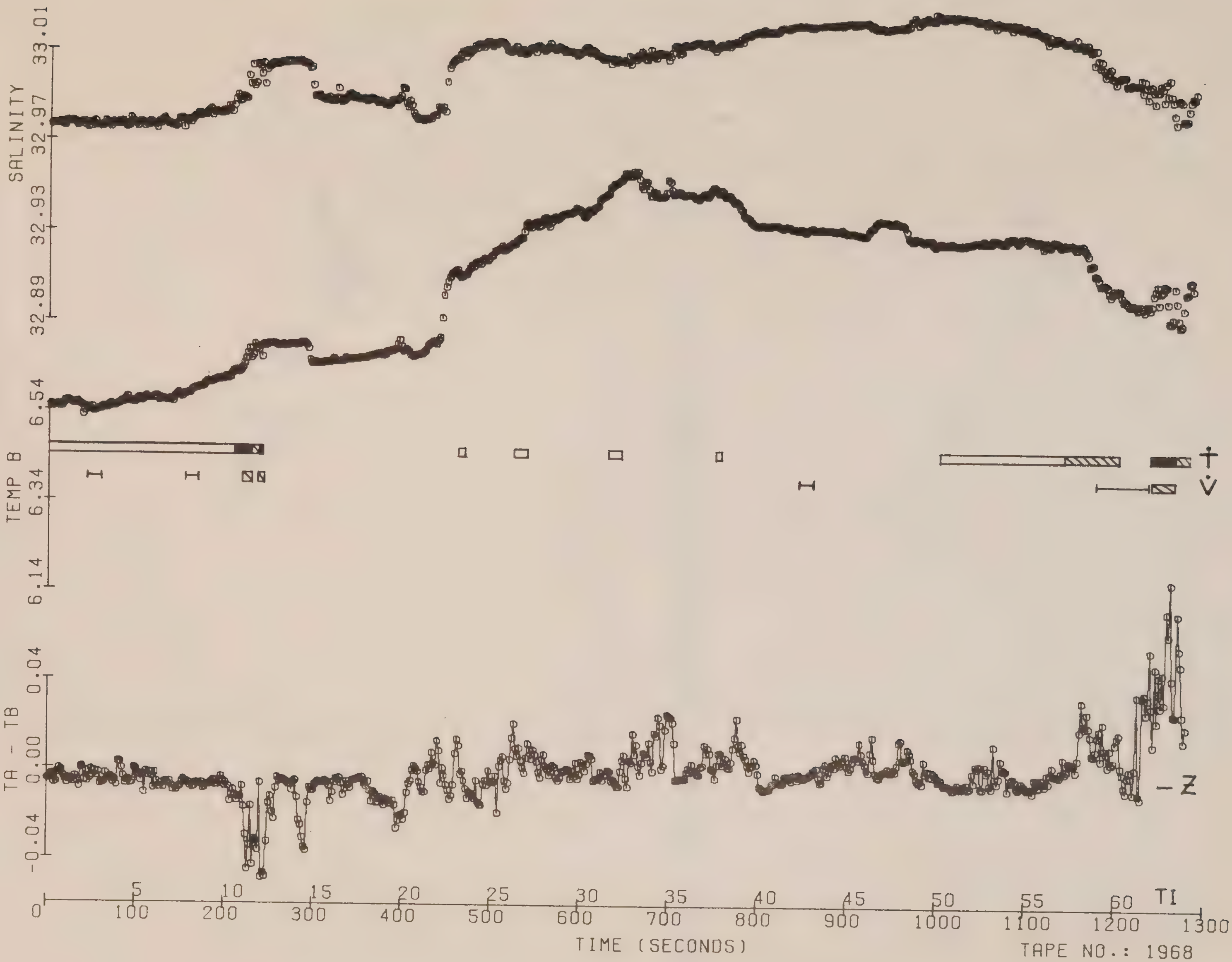
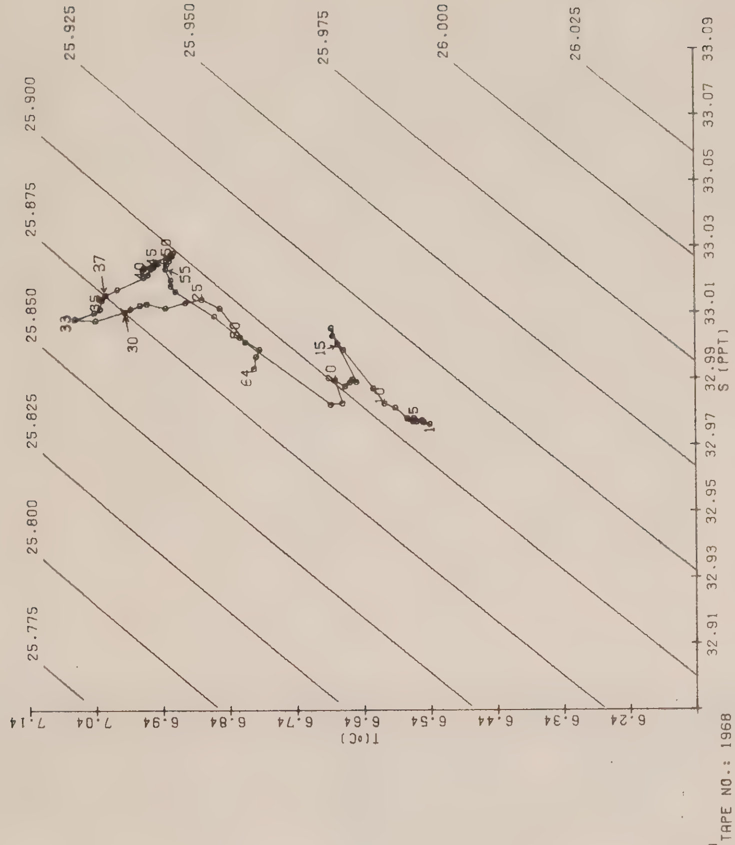

SALINITY
33.01
32.97
32.93
32.89
TEMP B
6.54
6.34
6.14
TA - TB
0.04
0.00
-0.04
- Z
TI
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
5
10
15
20
25
30
35
40
45
50
55
60
TIME (SECONDS)
TAPE NO.: 1968

Figure 6(b) For details, see caption to Figure 5(b).


25.775
25.800
25.825
25.850
25.875
25.900
25.925
25.950
25.975
26.000
26.025
T(°C)
S (PPT)
TAPE NO.: 1968

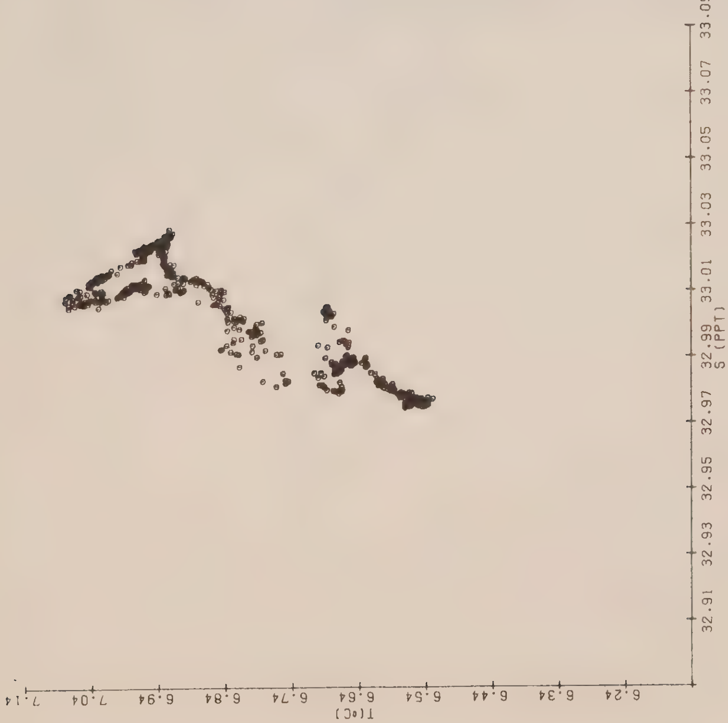
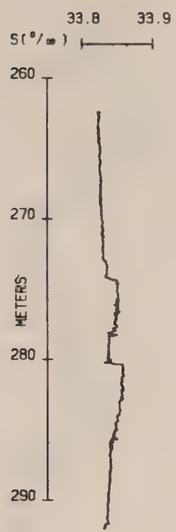
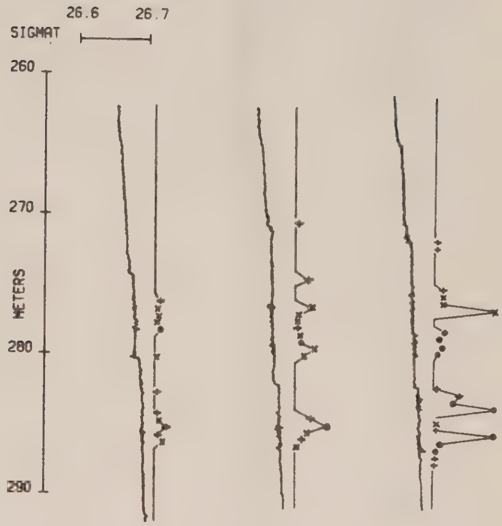

T(°C)
S (PPT)

Figure 7 Quasi-vertical profiles of T, S, and σ_t, obtained from the saw-tooth mode of operating the towed body: scales refer to the first profile of each set. This data was taken off the coast of Washington in 1972, and is included as an example of areas with fine structure inversions of T and S combining to produce step-like features in the density profile.


33.8
33.9
S(°/oo)
260
270
280
290
METERS


26.6
26.7
SIGMAT
260
270
280
290
METERS

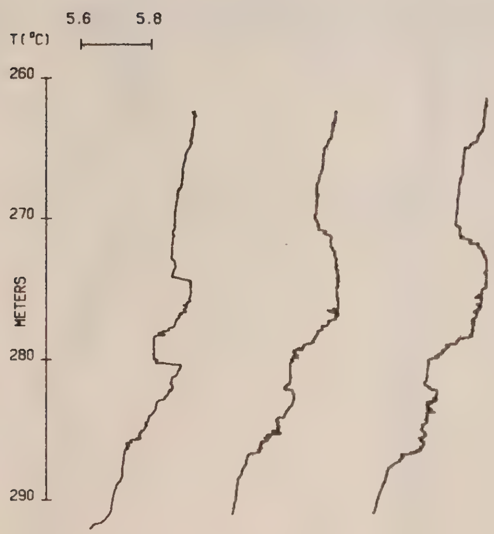

5.6
5.8
T(°C)
260
270
280
290
METERS

Figure 8(a) This tow was taken in the eastern North Pacific, at approximately $31^{o}30'N$, $145^{o}W$. For further details, see caption to Figure 5(a).

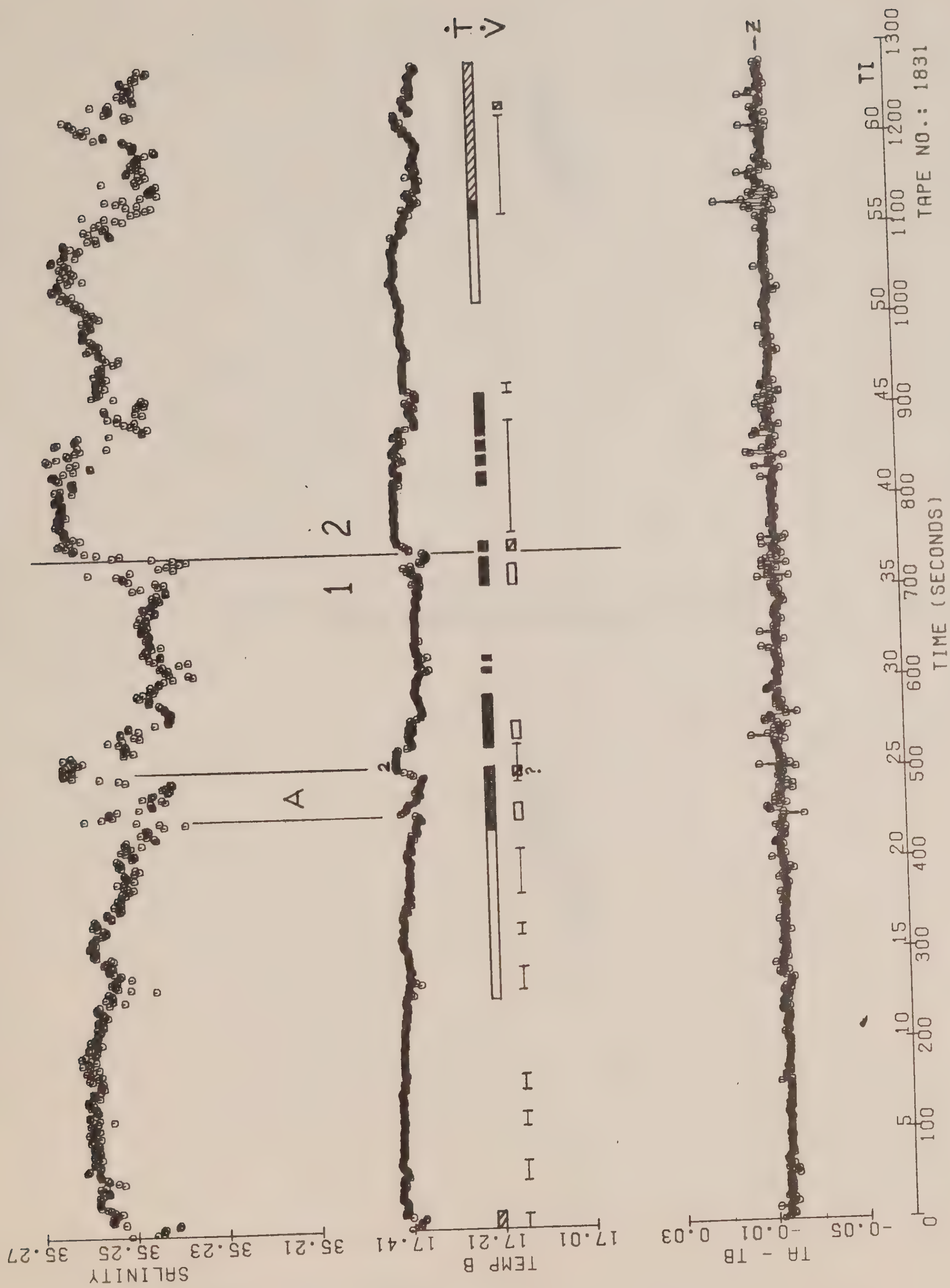
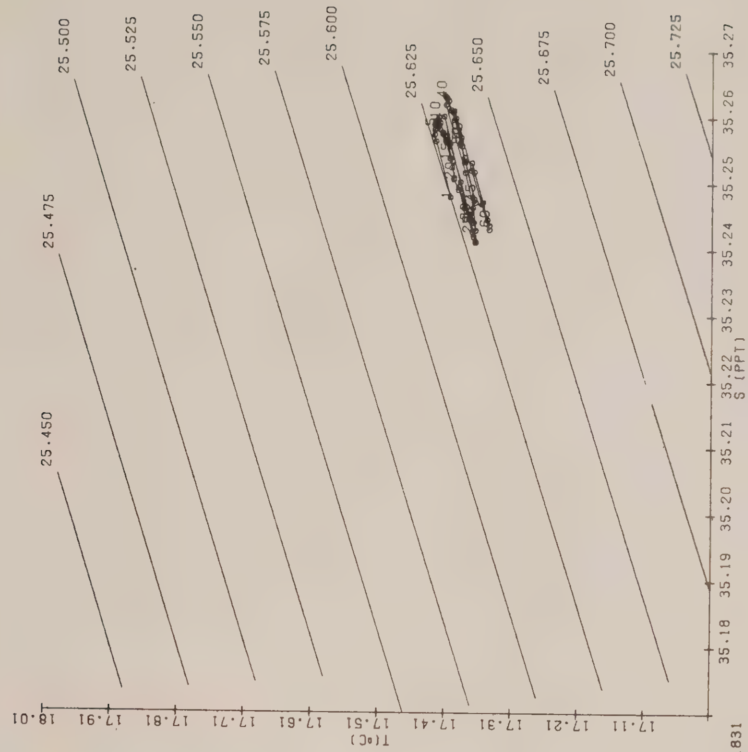
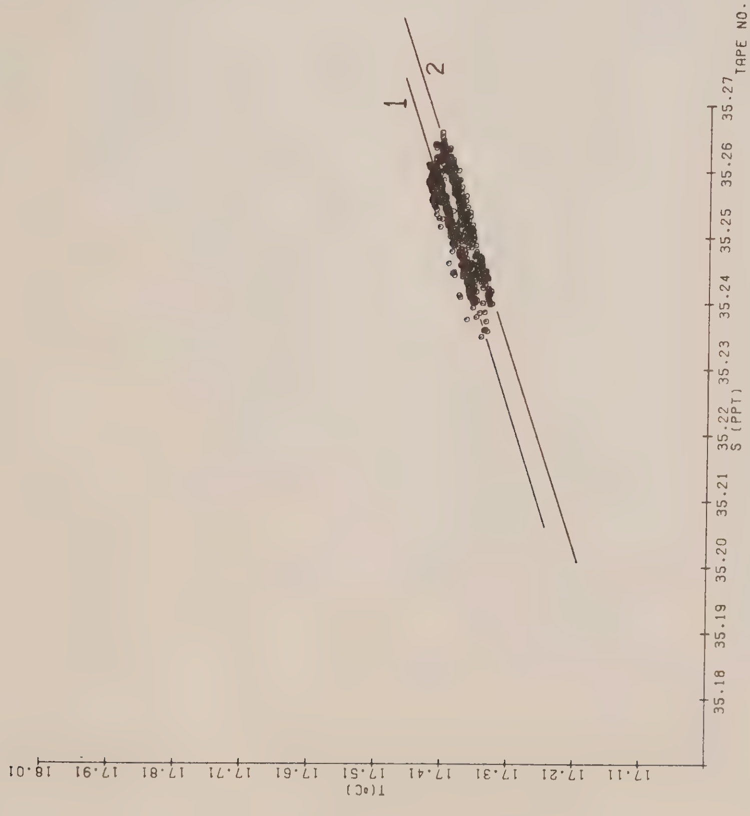

SALINITY
35.27
35.25
35.23
35.21
TEMP B
17.41
17.21
17.01
TA - TB
0.03
0.01
-0.01
-0.05
A
1
2
TIME (SECONDS)
TAPE NO.: 1831
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
5
10
15
20
25
30
35
40
45
50
55
60

Figure 8(b) For details, see caption to Figure 5(b).


25.450
25.475
25.500
25.525
25.550
25.575
25.600
25.625
25.650
25.675
25.700
25.725
T(°C)
18.01
17.91
17.81
17.71
17.61
17.51
17.41
17.31
17.21
17.11
S (PPT)
35.18
35.19
35.20
35.21
35.22
35.23
35.24
35.25
35.26
35.27

TAPE NO.: 1831


1
2
T(°C)
18.01
17.91
17.81
17.71
17.61
17.51
17.41
17.31
17.21
17.11
S (PPT)
35.18
35.19
35.20
35.21
35.22
35.23
35.24
35.25
35.26
35.27